The Diffusion Mentoring Model: A Versatile Framework for Encouraging Professional Growth

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[**Abstract]** Organizations face increasing pressure to provide timely professional development (PD) to large groups while maintaining the depth and individualized support characteristic of mentoring. Traditional PD methods often scale efficiently but lack sustained application, while one-on-one mentoring is difficult to expand quickly. This article introduces the *Diffusion Mentoring Model* (DMM), a three-layered framework that integrates large-group instruction, peer collaboration, and individualized mentoring to achieve both scalability and impact. Grounded in adult learning theory and best practices in training and development, the DMM supports skill acquisition, reflective practice, and learning transfer. Case applications in academia, corporate training, and healthcare education demonstrate their flexibility across diverse contexts. The article concludes by highlighting the DMM's potential as a scalable, high-quality approach for organizations seeking to deliver rapid and sustainable professional growth.

[Keywords] Diffusion Mentoring Model (DMM), professional development, skill development, functional mentoring, communities of practice.

Introduction

The need to provide timely professional development (PD) to large numbers of practitioners can present a challenge for organizations. While group-based training programs can reach many participants quickly, they often lack the relational depth, individualized guidance, and contextual application that make PD combined with mentoring support so effective (Walters et al., 2020). Traditional classroom training followed by one-on-one mentoring, while effective in fostering deep learning and skill development, often cannot be scaled up for large audiences when short deadlines exist. Likewise, many traditional mentoring frameworks are intended for small-group application and may not be appropriate in situations of high-volume demand (Peno & Silva Mangiante, 2021).

Bridging this gap requires a PD and mentoring approach that is both scalable and impactful, capable of delivering meaningful professional growth experiences to large cohorts in a short period of time. This article introduces the Diffusion Mentoring Model (DMM) (hereinafter referred to as DMM or the model) which was developed specifically to deliver high-quality professional development and mentoring to a large cohort facing a short timeline (Silvia, Prisco, & Peno, 2025).

It also supports the notion of learning transfer by providing ongoing support, during and post-training. Learning transfer is the positive transfer of training, "the extent to which the learning that results from a training experience transfers to the job and leads to meaningful changes in work performance" (Ford et al., 2017, p. 5). The DMM equips users with a flexible approach to meeting learners where they are, scaffolding their development of skill, and providing the ongoing support they need for effective implementation.

Grounded in adult learning theory, best practices in training and development, skill development frameworks, and mentoring with reflective practice, the model integrates structured instruction, peer collaboration, and tailored scaffolding to ensure effective learning and transfer. The sections that follow provide a brief literature review on PD, outline the theoretical foundations of the DMM, describe its structure and implementation processes, illustrate its application through case examples, and discuss its implications for organizations seeking to intentionally deliver and support rapid, high-impact mentoring at scale.

Literature Review

Large-scale PD initiatives have traditionally relied on workshop-based training, online learning modules, and conference-style events to reach broad audiences efficiently (Desimone & Garet, 2015; Main & Pendergast, 2018). While these approaches are effective for disseminating information, research has consistently shown that they often fail to provide sustained support, individualized feedback, and opportunities for application in authentic contexts, which are the hallmarks of effective mentoring (Eby et al., 2013; Hobson et al., 2009). Existing models rarely integrate multiple critical dimensions: the scalability afforded by large-group instructional formats, the developmental sensitivity characteristic of skill progression frameworks, the reflective rigor emphasized by Schön (1983), and the collaborative engagement that lies at the core of communities of practice (CoPs) (Lave & Wenger, 1991). The DMM aims to address these limitations by combining structured large-group learning with facilitated peer interaction and guided reflective practice. We begin with an examination of adult learning processes, which establishes a critical foundation for the model.

Adult Learning Theory and the Diffusion Mentoring Model

In this section, we situate the DMM in adult learning theories and principles of practice. We explore how andragogy (Knowles, 1980, 1984), experiential learning theory (Kolb, 1984), transformative learning theory (Mezirow, 1991, 2000), and situated learning (Lave & Wenger, 1991) inform the DMM and its layers of implementation. Collectively, these frameworks highlight how the DMM supports adult learners through relevance, practice, and shared inquiry. The DMM is fully explored in Figure 1 below and in the section entitled DMM overview.

The DMM aligns closely with central principles of adult learning theory, which provide a framework that is both practically oriented and theoretically grounded. Knowles' Theory of Andragogy (1980, 1984) highlights that adults are self-directed, have accumulated life and professional experiences they draw upon, and are motivated to learn, especially when content is immediately useful to them and relevant to their work. The three layers of the DMM operationalize these principles by providing structured opportunities for relevance, application, and autonomy. In the first layer, program leaders introduce new concepts and practices in ways that connect directly

to participants' professional responsibilities, thereby addressing the adult learner's need for relevance. In the second layer, peer discussion groups create spaces where learners can integrate prior experience with new knowledge through collaborative dialogue. Finally, in the third layer, one-on-one mentoring provides individualized guidance that supports learner autonomy and self-direction in setting and achieving developmental goals.

Kolb's (1984) Experiential Learning Theory further illuminates the learning processes embedded in the DMM. According to Kolb, adults learn through an iterative cycle of experience, reflection, conceptualization, and experimentation. The DMM encourages this process by moving learners from general exposure (layer 1), to reflective problem-solving with peers (layer 2), and ultimately to applied practice and personalized coaching (layer 3). The layered structure of the model ensures that participants not only acquire new knowledge but also engage in iterative cycles of reflection and application, thereby deepening professional learning.

The DMM also resonates with transformative learning theory (Mezirow, 1991, 2000), which emphasizes the role of critical reflection and dialogue in enabling adults to challenge assumptions and reshape perspectives. In the first layer, exposure to new frameworks may prompt disorienting dilemmas that question established practices. The second layer offers peer dialogue as a means to critically examine these dilemmas, while the third layer provides individualized mentoring to help learners navigate the emotional and cognitive shifts that accompany transformation. In this way, the DMM provides a scaffolded approach that supports both incremental and profound changes in professional practice.

Finally, the model draws on the social and situated dimensions of learning advanced by Lave and Wenger (1991) and Wenger (1998). Learning occurs within communities of practice where novices and experts collaboratively engage in shared professional challenges. The DMM's second layer explicitly functions as such a community, fostering collaboration, shared inquiry, and the co-construction of knowledge. The literature on CoPs (Lave & Wenger, 1991; Wenger, 1998) underscores that professional learning is most effectively cultivated through sustained, collaborative inquiry among individuals who share a common domain of practice. Although such communities can serve as powerful mechanisms for professional growth, they frequently emerge in organic and incremental ways, which may limit their capacity to address the immediacy or scale of pressing organizational demands. The third layer further reflects the apprenticeship model of situated learning, in which individualized mentoring supports progressive movement from peripheral participation toward fuller engagement in a professional domain.

Taken together, these connections illustrate that the DMM is not merely a structural approach to mentoring but one that embodies core principles of adult learning theory. By integrating andragogy, experiential learning, transformative learning, and situated learning, the model provides a comprehensive and flexible framework that both reflects and reinforces the ways in which adults learn most effectively. In doing so, the DMM offers a theoretically grounded and practice-oriented method of mentoring that aligns with adult learners' needs for relevance, reflection, and contextual application.

Best Practice in Training and Development

A model for best practice in PD is the 55-25-20 model that suggests the use of 55% experiential learning, 25% social learning, and 20% formal instruction (Paine, 2021). Experiential learning activities focus on provision of hands-on, real-world experiences like case studies and simulations to help learners process concepts in a meaningful way that is connected to their own contexts. Through CoPs, social learning activities provide learners with opportunities to process concepts more deeply through discussion, collaboration, and engagement with differing perspectives. Finally, formal instruction is used mainly to provide foundational information through traditional methods like lecturing and direct instruction. The 55-25-20 model conceptualizes learning as an integrated process in which formal instruction establishes foundational knowledge that is subsequently reinforced and expanded upon through social interaction and experiential application.

The DMM incorporates this integrated learning process throughout its levels (Figure 1), closely adhering to the suggested percentages of 55-25-20. For example, in layer 1 (formal instruction), learners are introduced in a large group to the foundational concepts of the PD. In layer 2, social learning is encouraged through peer mentoring and CoPs, and experiential learning occurs in both layers 2 and 3 where learners have opportunities to consider a variety of applications of what they learned in layer 1.

Skill Development

The literature on skill development highlights the importance of mentoring approaches that are aligned with learners' developmental stages (Dreyfus & Dreyfus, 1988; Peno & Silva Mangiante, 2012, 2021). The Dreyfus and Dreyfus (1988) framework describes progression of a practical skill from novice to expert, emphasizing that learners at different stages require distinct levels of autonomy and practice. Building on this foundation, Peno and Silva Mangiante (2012, 2021) developed the Purposeful Ongoing Mentoring Model (POMM), which integrates the Dreyfus model with Vygotsky's Zone of Proximal Development (1978) and Schön's (1983) notion of reflective practice.

The POMM provides a structured approach in which mentors and mentees collaborate to support the mentee's advancement along the Dreyfus model, using scaffolding (Vygotsky, 1978) and reflective practice (Schön, 1983) to facilitate growth. By linking developmental theory with practical mentoring strategies, the POMM ensures that support is responsive to learners' evolving needs and fosters sustained professional development. These concepts are central to layers 2 and 3 of the DMM in particular, where learners work in tandem with more capable others to develop higher levels of skill (Figure 1).

Mentoring

In this section, we introduce and compare/contrast general and functional mentoring (FM) to provide context for the DMM. While both are valuable, FM aligns more closely with the DMM. This comparison highlights why, and in which ways, the DMM offers a distinct approach to professional learning and support.

General Mentoring

Mentoring may take many forms and include a variety of strategies (Peno et al., 2016; Sanfey, 2013); in-person, face-to-face or online mentoring (King, 2016), one-on-one collaborations, mentoring networks (where an individual relies on the expertise and guidance of a number of individuals) (Chandler, et al., 2016), peer interactions and reverse mentoring (where a junior employee mentors a senior employee), to name a few. General mentoring is commonly understood as a developmental relationship in which a more experienced individual offers guidance, knowledge, and psychosocial support to a less experienced counterpart (Kram, 1985). Such relationships may emerge formally through structured programs or informally through organic connections, and they frequently address a broad range of personal, professional, and intellectual growth outcomes (Crisp & Cruz, 2009).

As a foundational construct, general mentoring provides the conceptual basis for examining the diverse forms of mentoring that occur across academic, organizational, and community contexts, and it establishes a framework for distinguishing more specialized approaches to mentoring. In this regard, an understanding of general mentoring is essential for situating FM, which builds on these principles while addressing specific developmental objectives.

Functional Mentoring

Different from general mentoring, where the goal is the development of mentor-mentee relationships to help the mentee progress across multiple dimensions, FM consists of mentoring and coaching activities where a specific project or need of the mentee is addressed (Thorndyke, 2008). In essence, the work of the mentor-mentee is centered on the project, which has clear objectives and should lead to measurable outcomes, while also developing skills that can be applied beyond the project at hand. In this way, FM incorporates a task-oriented approach to ensure that a task is accomplished successfully while simultaneously developing the mentee in a broader professional sense. An example of this is related to developing research skills for a particular study: the mentee will develop these skills under the guidance of an experienced research mentor and will be able to apply the skills beyond the immediate study of concern.

As FM is often focused on a project (or program) of the mentee's choosing, the main purpose is for the mentor's skills to match the mentee's needs to complete the project as the mentor guides the mentee satisfactorily. The goal is for the mentee to complete the project and develop the knowledge and skills necessary to do so, while the institution sponsoring the mentoring receives some benefit from project completion. FM has been combined with PD activities in some medical education mentoring programs (Kashiwagi, 2013), providing an example of how PD and FM can be paired together. While FM focuses on the needs of the mentees and the specific project, it does not prevent the development of general mentoring, as well.

Table 1
Comparison of General and Functional Mentoring

Feature	Functional Mentoring	General Mentoring
Primary focus	Achieving specific, measurable outcomes related to a particular project or skill to be acquired.	General personal and career development.
Duration	Short-term; defined by the scope and timeline of the project.	May be short or long-term, depending on the needs of the mentee
Matching	Mentors are chosen for their expertise in the specific project area.	Expertise in an area is important, but compatibility is also considered.
Outcome	A project-based outcome, such as development of a skill, a new program, or publishing a manuscript.	Personal and professional growth is primary. Other secondary results may occur.

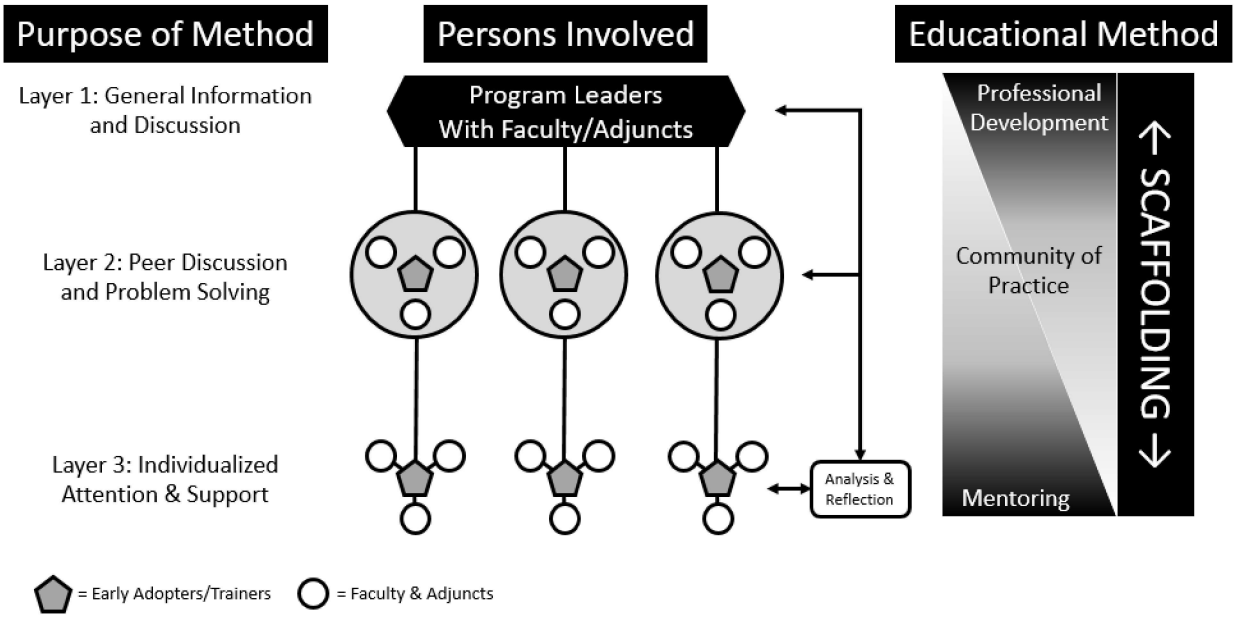
Adapted from Thorndyke, 2008

DMM Overview

The Diffusion Mentoring Model (DMM) comprises three interrelated layers, each integrating specific components designed to facilitate mentees' acquisition of knowledge and skills aligned with the program's objectives. While informed by the principles of FM (Thorndyke, 2008), the DMM diverges from traditional FM approaches in that the organizational context, rather than the individual mentee, primarily determines the mentoring needs relative to project goals. This structure enables a smaller group of program leaders to provide effective mentoring to a substantially larger cohort of mentees, thereby addressing both scalability and the need for timely support.

The three layers of the model in sequence include 1) a general education layer where PD related the organization's program/issue occurs, 2) a group mentoring layer where mentors provide group mentoring within CoPs, and 3) an individual mentoring layer to address mentee-specific needs within the program. Each of these layers involves different persons engaging in different roles and can be seen in Figure 1 below.

Figure 1
The Diffusion Mentoring Model



Layer 1: General Information and Discussion

Layer 1 focuses on general PD of the mentees involved in the program/issue at hand. Program leaders provide the mentees with instruction on the core knowledge and skills needed for the project in a large-group, didactic format. Mentees are exposed to the basic components of the program and how to employ it, and they have opportunities to ask the program leaders questions on the program. Notably, this layer is not intended to include true mentoring for all mentees, but rather it offers foundational content needed for all participants.

During this time, program leaders can simultaneously recruit volunteers from among the mentees to become *early adopter* mentors. These early adopters receive training related to 1) the program components and 2) effective group and individual mentoring techniques. This expands the pool of mentors beyond solely the program leaders, allowing for more reasonably sized CoPs for subsequent layers of the model. It also develops the early adopters as mentors, preparing them to both mentor their CoPs and model these group and individual mentoring techniques with their mentees. Ideally this develops the mentees' mentoring abilities so they can utilize them later in their interactions with their own learners or subordinates. This scaffolding increases the overall impact of the model beyond FM for the target program.

Layer 2: Peer Discussion and Problem Solving

The second layer begins with mentors being assigned a group of mentees within a CoP, ideally, from a similar background or work setting to provide group mentoring. Mentors lead group discussions to formulate solutions to any concerns related to the program raised by mentees. The

CoPs meet as frequently as the group feels necessary, but generally more frequently during the early implementation of the target program while mentees are still acclimating to it. Subsequent meetings may be scheduled around milestone events within the program, such as prior to interim program assessments or other significant timepoints. The goal is for the mentors to facilitate peer-to-peer problem solving techniques and share success stories to allow for all mentees to benefit from the CoP.

Layer 3: Individualized Attention and Support

The third layer is where individual mentoring takes place based upon specified needs. If a mentee requires more individualized mentoring to resolve a concern not adequately addressed within layer 2, then they can meet with their mentor for one-on-one mentoring to develop individualized plans to address the concern. Additionally, if any ongoing programmatic assessment identifies concerns with the program within a specific community or with an individual mentee, this information can be shared with the corresponding mentor(s), allowing them to address the concerns using mentoring techniques. These individual mentoring sessions are scheduled based upon the needs of the mentee or the program.

In addition to the early adopter mentors leading a CoP, they also have their own CoP with the program leaders. This ensures that the mentors continue to receive mentoring from the leaders, and they can scaffold this mentoring to their own mentees. It also allows for a programmatic *feedback loop* (Argyris, 2004), where the mentors have a direct means to bring specific concerns from their communities and mentees to the program leaders, share those concerns with other mentors to determine if they are more widespread within the program, and receive information from the leaders to bring to their communities. This intentional, bidirectional feedback loop distinguishes the DMM from traditional scaffolding models, as it embeds structured two-way communication within the mentoring process.

Application of the Model

The DMM has applications across a wide variety of fields since information sharing and mentoring is a universal need for learners across many settings, from educational environments to the workplace. The model could be utilized in most situations where rapid, large-scale high-quality mentoring is required, especially when there are limited personnel to lead such an endeavor. The model also incorporates PD with both group and individual mentoring, providing a multifaceted approach to development related to the program of focus. Several example applications of the DMM are provided below.

Application in Academia - Graduate Teaching Assistants and Faculty Development

In academia, we have two areas of possible implementation to illustrate. The first is for Graduate Teaching Assistants (GTAs) and the second is for faculty. For both academic groups, the DMM can be effectively applied in development programs. The first layer introduces GTAs or faculty to essential teaching practices and professional expectations through large-group seminars led by program directors. These sessions provide a shared foundation by covering instructional strategies, institutional policies, and opportunities for professional growth, while also creating space for open

discussion. In the first layer of the DMM for faculty, both scholarship and service components would be introduced as well.

Building on this foundation, the second layer brings GTAs or faculty into smaller peer groups facilitated by faculty mentors who have been provided additional training and support from program directors. In these CoPs, participants share classroom challenges, collaborate on problem-solving, and exchange strategies for applying theory to real teaching contexts. This peer dialogue not only strengthens individual teaching skills but also fosters a culture of mutual support. Specifically for faculty, challenges in publishing, securing grants, efficiency in service contributions, and aligning passions to service are excellent topics to engage in with peers.

The third layer provides targeted, individualized mentoring for GTAs or faculty requiring additional guidance. For example, faculty mentors can observe classes, provide detailed feedback, and work one-to-one with GTAs or faculty to design skill-building exercises tailored to their needs. By layering general information, collaborative problem-solving, and personalized mentoring, the program ensures that mentees benefit from broad preparation, shared learning, and customized support.

Application in Corporate Training – Leadership Development Program

In a corporate training context, the DMM can guide the design of leadership development programs for emerging managers. The first layer establishes a foundation by introducing participants to the organization's vision, leadership frameworks, and career development opportunities. Delivered through large-group workshops led by training managers, these sessions combine presentations, case studies, and open forums to engage participants in reflection and discussion.

In the second layer, participants shift into smaller groups, each facilitated by early-adopters of the program. These CoPs serve as collaborative spaces where participants work through leadership challenges such as team motivation, conflict management, and task prioritization. By analyzing real-world scenarios together, participants learn how to apply leadership principles while drawing on their peers' diverse experiences.

The third layer provides one-on-one executive mentoring for participants who need more individualized support. In these sessions, mentors engage participants in coaching conversations that may include reviewing 360° feedback (feedback received from co-workers, clients, etc.), clarifying career goals, and creating action plans for growth. This personalized layer ensures that participants receive not only broad exposure and collaborative problem-solving but also tailored guidance for their unique leadership trajectories.

Application in Healthcare Education

As curricular standards within healthcare education change, the training and mentoring needs of faculty must be addressed. One example of this is within pharmacy education where new curricular standards initiated in 2025 incorporated the use of entrustable professional activities (EPAs) (ACPE, 2025) which help learners demonstrate their capabilities in expected professional tasks. Inclusion of EPAs within pharmacy education necessitated the move from traditional assessment methods of learners' skills to a new method based upon entrustability. For many faculty in pharmacy education, this shift in assessment methods required significant training on the new

entrustability assessments and mentoring to employ them appropriately to evaluate students' skill competency (Silvia et al., 2025). This created a highly suitable environment to utilize the DMM.

As many pharmacy programs typically have large numbers of both full-time faculty and adjunct faculty for experiential coursework (where the EPAs would be assessed), the need for the DMM is apparent. Utilizing a small number of program leaders who developed the EPA-based assessments, programs can use the DMM to develop a group of early adopter faculty to become mentors, provide the general professional development to all full-time and adjunct faculty through continuing education and other didactic programs (layer 1), and utilize the early-adopter mentors for the group and individual mentoring described within the model (layers 2 and 3). Faculty can be grouped by clinical practice setting (inpatient, ambulatory care, community outpatient, etc.) in order to share similar experiences in applying and assessing the EPAs within their settings.

This PD approach also allows for group problem-solving within layer 2 of the model, as the mentor can lead the community in sharing or developing solutions to common problems that may be noticed by many within the CoP. If a mentee has a more individualized concern or the program assessment reveals that an individual may need specific intervention(s), the mentor can then discuss this with the mentee to find a viable solution to the problem, as described in layer 3. Considering that many pharmacy schools likely need to implement the new assessment method in a short period (e.g., 6 months or less), the diffusion of mentoring through the model from a small number of program leaders to a large cohort of mentees is advantageous to ensure a timely and effective implementation of the new assessment method.

Implementation of the Model

In order to utilize the DMM effectively, several factors should be considered. First, we recommend determining the number of available mentors and mentees requiring mentoring. If the mentee to mentor ratio seems too large based upon the needs of the program, recruiting volunteers from among the mentee pool to serve as early adopter mentors would alleviate this concern. These volunteers may appreciate the opportunity to get more in-depth training on the new program, as well as the development of mentoring skill. This training will require an additional resource: program leaders who have received training on group and individual mentoring (Table 2). For appropriate scaffolding of mentoring techniques to occur, the leaders must be adequately trained on the mentoring principles being utilized within the model. Alternatively, an outside individual who already possesses mentoring training can serve as the mentoring leader for the model, supplementing the knowledge of the leaders overseeing the program. Additional enticements for early-adopters may also need to be considered, such as financial stipends, release time, or other compensation for serving in this role.

Table 2
Mentoring Training of Early Adopter Mentors

Topic	Content Areas
General Mentoring Principles	Developing mentor-mentee relationships
	Frequency of effective mentoring meetings
	Assisting mentees in determining their mentoring needs
	Guiding mentees through personal reflection to obtain solutions rather provide solutions as a mentor
	Use of the POMM-R as a mentoring tool
Mentoring versus Coaching	Concepts of coaching as a focused area of development within a mentee compared to the more comprehensive person development within mentoring.
	Task/skill orientation compared to overall personal and professional orientation
	Functional Mentoring as a combination of both methods to mentor related to a specific project or skill
Group Mentoring Techniques	Techniques for leading group discussions and meetings
	Group dynamics
	Conducting group mentoring sessions
	Peer-to-Peer mentoring techniques
Facilitating Group Problem Solving	Leading the development of a shared group problem
	Facilitating group discussion of the problem, including members' past attempts to solve the problem
	Leading the development of group consensus to develop a proposed solution to the problem
Individual Mentoring Techniques	Determining when individual mentoring is needed for a mentee
	Applying appropriate mentoring principles to mentee meetings
	Assisting mentees in reflecting on the described problem

An appropriate timeline should also be developed, particularly if the program implementation is taking place in a condensed timeframe. The first layer of professional development can co-occur with the development of early-adopters, as both these new mentors and the mentees will need to receive the core knowledge for the new program. The mentoring training for the early-adopters

can occur simultaneously while mentees receive the professional development components of the first layer. Once the mentoring layers 2 and begin, program leaders can assist mentors in developing an appropriate schedule of community meetings, particularly during the early stages of program implementation. Additional timepoints for community meetings and other mentoring activities should be considered based on other important points during the ongoing program rollout, particularly any program assessment points. Meetings of the mentors' CoP with the program leads, especially if early-adopters are used as mentors, should also be scheduled throughout this process.

Developing appropriate CoPs is also a vital step in utilizing the model. Placing the mentees within a group based on similar characteristics and with a mentor who shares those characteristics is key to the model working effectively. Establishing the communities so the members share characteristics of importance, such as workplace setting, job function, or other relevant components, can assist in the group mentoring process since they can relate effectively to each other, and their shared experiences and successes will have more applicability to all community members. Otherwise, the recommendations of one member may not be useful to other members due to inherent differences in their functional roles. Careful consideration by the program leaders of the important characteristics for compiling the CoPs should be determined before the communities are formed.

Conclusions and Recommendations

The DMM has potential for application across various settings and fields of practice as it combines traditional PD with mentoring. In situations where a limited supply of trained mentors is a concern, particularly with a large group of mentees, the model allows for the training of additional mentors while providing the initial PD for the program of interest. This process, combined with the use of group mentoring within CoPs, provides for effective mentoring for a larger number of mentees simultaneously. It also incorporates individual mentoring capabilities when required to address program-specific and mentee-specific needs using the two-way communication feedback loop.

The model was developed with a focus on FM, where a specific program or task is the focus, rather than general mentoring. While it may be more applicable and appropriate for FM, in situations where general mentoring is desired to develop the mentee across dimensions as opposed to a specific program focus, this model may not be as useful. Evaluating the DMM in the context of general mentoring for personal and professional growth is an area for further research.

The DMM demonstrates considerable potential as a mentoring approach with applicability across a wide range of contexts. Ongoing application and empirical investigation—particularly its adaptation to new fields and diverse mentoring purposes—could further substantiate its effectiveness and efficiency in supporting large cohorts of mentees.

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