Transfer of informal learning: The role of manager support in linking learning to performance

Brian D. Blume [a,*], J. Kevin Ford [b], Jason L. Huang [b]

[a] *University of Michigan-Flint, 303 E. Kearsley St., Flint, MI 48502, USA*
[b] *Michigan State University, East Lansing, MI 48824, USA*

Abstract Organizations face increasing demand for employees to develop their skills, and managers play an important role in supporting employees' learning and development. In contrast to the large body of research evidence on formal training, the emerging findings on informal learning have yet to provide managers with the necessary guidance to support employees' informal learning activities. Adopting a coaching analogy, we integrate these two research streams to introduce a model with which managers can simultaneously support employees' formal and informal learning. We elaborate on three critical dimensions of support, including direct assistance, guidance, and emotional support. We then present specific steps managers can adopt along each of these dimensions to better engage in employees' needs assessment, enhance their motivation to learn, and facilitate learning. Finally, we explain how managers can use a strategic learning plan for each employee and create synergy across formal and informal learning support, resulting in a positive learning climate.

1. Organizational training and development

Transfer is so clearly and unambiguously tied to (a coach's) success. No one cares about a coach's ability to get practice performance; the sole goal of concern is game performance.

—Timothy Baldwin (personal communication, August 2, 2007)

Work organizations have witnessed the increased importance of employee training, learning, and development (Hastwell, 2023; Herrity, 2023). Advances in technology have created jobs that are more cognitively complex and demanding.

* Corresponding author
  E-mail addresses: blume@umich.edu (B.D. Blume), fordjk@msu.edu (J. Kevin Ford), huangjl@msu.edu (J.L. Huang)

Organizations have become leaner, resulting in broader responsibilities for workers. Across industries there is a heightened emphasis on interpersonal and communication skills as well as on collaboration and teamwork. Work is also becoming more knowledge-driven, requiring a deeper combination of information sharing and expertise to be applied to decisions or work situations. Expectations have risen for leaders to take on roles of coaching, mentoring, and facilitation as well as traditional leader roles (Kraiger & Ford, 2007).

Individuals with advanced education and training can face skill obsolescence without additional attention to skill enhancement. For example, it is estimated that an engineer's education has a half-life of 5 years, meaning that half of what is learned in school is obsolete 5 years after graduation (Kruchten, 2008). Given the outsized role a manager can play in employees' development (Chopra-McGowan, 2022), managers need tools to help employees stay up to date on knowledge and skills. Managers/supervisors[1] play a key role in developing and supporting employee engagement in continuous learning, thereby helping their organizations manage their strategic and human resources more dynamically (Apascaritei & Elvira, 2022).

To date, while much research has focused on formal learning and on the factors that support or constrain what is transferred or applied in the workplace (Baldwin & Ford, 1988; Bell et al., 2017; Blume et al., 2010), comparatively little research has examined what managers can do to support informal learning and then to facilitate transfer of that learning in order to enhance development and job performance. To address this need, we reconceptualize the manager as a coach of employees' learning and development goals, which encompasses both formal training sponsored by the organization and informal learning that is more employee-driven (Ford, 2021). Two main situational readiness factors that facilitate informal learning have been identified: opportunity and support (Tannenbaum & Wolfson, 2022). The manager can serve both as a key source of support for employees and assist employees in navigating the opportunities for informal learning that exist in their environment. Managers can inspire and encourage learners to be self-driven in learning the information they need, which fosters curiosity.

One way to do this is to promote a "guide on the side" method rather than a "sage on the stage" method. The "sage" environment is what occurs in a more formal setting when an instructor teaches the learner what they need to know, while with the "guide" method, learners receive informal help as they explore and learn things on their own (Gardner, 2020). For example, as managers are involved in the onboarding process with new sales employees, they can empower employees to complement any formal training they receive by incorporating informal learning practices. This managerial role can help guide employees to perform better, which subsequently makes them more likely to be promoted and to remain with the company (Runnalls et al., 2023).

In the following sections, we first describe formal and informal learning and the transfer of learning. Then we discuss supervisor support, including examining the manager's role as a coach. This leads to our model of manager support for formal and informal learning (Figure 1) and our framework of best practices for supervisor support of informal learning (Table 1). Finally, we recommend that managers provide a strategic learning plan to support employee learning and the transfer of that learning to the job.

2. Formal and informal learning

Learning can be defined as "the process of employees enhancing their human capital through acquiring knowledge, skills, abilities, and other characteristics (KSAOs)" (Noe et al., 2014, p. 247). There are different types of learning, including informal and formal, intentional and incidental, and self-versus other-directed (Tannenbaum & Wolfson, 2022; Wolfson et al., 2018). While we recognize these complexities, we focus in this article on the informal and formal learning dimension. Whereas formal learning is designed for employees to acquire and apply a defined domain of KSAOs, informal learning is derived from employees' daily experiences on the job that enhance their KSAOs in some manner (Wolfson et al., 2018). Formal training is typically mandated or heavily encouraged by organizations. On the other hand, informal learning is less structured, and there are fewer scripted behaviors aimed at expanding knowledge and skills that are organizationally valued (Tannenbaum et al., 2010).

Informal learning has been found to be positively related to many desirable outcomes in the workplace, such as favorable work attitudes, knowledge/skill acquisition, and improved job performance (Cerasoli et al., 2018). Informal, field-based learning consists of three dimensions (Wolfson et al., 2018):

---

[1] We use the terms supervisor and manager interchangeably.

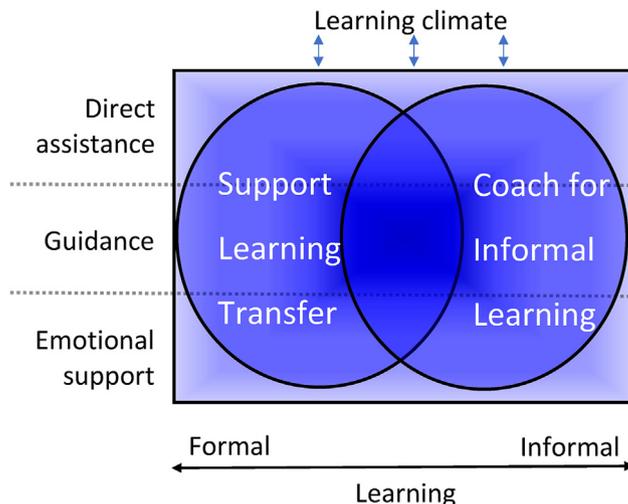**Figure 1.   Model of manager support for formal and informal learning**

Learning climate

Table 1.   Best practices for supervisor support of informal learning

Supervisor support ➡ Strategic focus ⬇	Direct assistance	Guidance	Emotional support
Learning needs	Identify current knowledge and skill deficits (e.g., 360 feedback, annual reviews). Direct learner to resources to use for self-directed learning.	Give advice on future skill needs given changing conditions and future directions/strategies.	Express respect for current competencies with emphasis on need for mastery orientation and continuous learning.
Motivation to learn	Provide time and resources to get the most out of informal learning. Set goals for learning and for maximizing opportunities to apply.	Explain organizational value of the new learning, as well as what is in it for the learner. Highlight practical nature and how it connects with learner's current situation, as well as expectations for future success.	Build confidence that skills can be learned and effectively applied. Talk about how manager felt in similar learning situations.
Application of learning	Providing Immediate opportunity to apply learning. Hold debriefing sessions to help learner develop lessons learned.	Give tips on how and where to apply new learning to challenging job situations. Refer to other sources (e.g., job experts) for advice on how to apply new learning.	Show interest in how it is going applying new learning. Listen to challenges in applying learning. Encourage continual application and learning from mistakes to foster continuous improvement.

1. *Feedback and reflection-based learning:* Intentionally requesting feedback from others, seeking coaching or advice from job experts, and asking others to debrief recent events and to discuss job experiences to determine how to improve performance in the future;

2. *Vicarious learning:* Intentionally observing someone doing their job so as to learn best practices that help one's own performance (e.g., asking someone to show the learner how to do a task more efficiently or effectively; asking direct questions of job experts about why they complete a task in a certain way); and

3. *Experimentation:* Intentionally adopting a different strategy or approach to a task and, using trial and error to uncover more effective ways to improve task performance (e.g., actively seeking challenges embedded in new job assignments/tasks that stretch the learner).

3. Transfer of learning

Whether focusing on formal or informal learning, two key goals for organizations are to ensure individuals can obtain the learning experiences needed to be effective on the job and that this learning is then effectively applied to the job to enhance performance. While the acquisition of KSAOs as a function of a training or learning opportunity is important, the ultimate goal of any learning endeavor concerns what happens on the job after it has been acquired. One, therefore, needs to think of learning with the transfer of the learning in mind (Baldwin et al., 2017). This topic of learning/training was Tim's primary research area. He and his coauthors published over 15 articles on the topic of training transfer, including one of the most influential articles on the topic (i.e., Baldwin & Ford, 1988), which Google Scholar indicates has been cited over 6,000 times. The notion of transfer is that learners should be able to use the knowledge and skills gained through a learning experience in settings beyond where the learning occurred. Learning transfer should have a positive impact on behaviors and performance, yielding long-term value for the learner and for the organization (Ford et al., 2018).

Tim Baldwin and his coauthors also published a quantitative review to examine which factors influence training transfer (Blume et al., 2010). This study and other research on formal training transfer have generally found positive relationships between transfer and predictors such as cognitive ability, conscientiousness, motivation, and a supportive work environment (Baldwin et al., 2009; Blume et al., 2010; Burke & Hutchins, 2007; Hughes et al., 2020). For example, in a hybrid training program, the extent of supervisor support affected trainee activity level and training transfer, which was measured by how much employees used the training and how effective they were in implementing it (Blume et al., 2023).

In general, both learner characteristics and the workplace environment affect the extent to which trainees will apply their learning on the job, so managers should get to know their employees and promote a supportive work environment to help them effectively implement their learning. In a conversation with Tim Baldwin (personal communication, March 2, 2014), he said:

> [It is] worth noting the distinction I got from the math education literature regarding knowing that vs. knowing how vs. knowing to. I had never heard that before, but it is quite apt. In math education, the archetypal example analogy is that students may know the principle and may know how to use the formula, but that's only good if they know when to use that formula. I think the analogy holds here for our transfer distinctions.

In other words, not only must employees acquire the knowledge and skills and learn how to implement them but they also need manager support to be able to identify the right opportunity and context for when to apply them.

Evidence is emerging concerning how organizations can encourage and support informal learning and then facilitate the transfer of that learning to enhance job performance (Runnalls et al., 2023). A key predictor includes support for informal learning. Three support functions include people support (e.g., supervisors, peers, role models), formal organizational support (e.g., rewards, processes, systems) and informal support (e.g., climate, social capital, culture, norms, perceived organizational support). Overall levels of support across these three domains have been found to increase informal learning behaviors (Cerasoli et al., 2018). While there are many ways organizations and managers can support learning, the learning transfer platform Promote International suggests creating one-page tip sheets or instructions for managers on topics like how to support learning/training (Brittain-Catlin, 2022). The focus on predictors of learning behaviors is one important part of the equation; the second part is whether the learning behaviors lead to effective application and improvement on the job. For this article, we

examine the role of supervision in these two processes of encouraging informal learning and of transferring this learning to the job.

4. Supervisor support

While support has been found to be important for encouraging informal learning, the development of best practices for managers requires a more in-depth examination. Supervisor support can be conceptualized as a superordinate factor that influences three lower-level dimensions (Blume et al., 2023; Ford et al., 2018). The three dimensions include direct assistance (e.g., helping employees with transfer tasks), guidance (e.g., offering advice and relevant information), and emotional support (e.g., empathizing with employees about difficulties in transfer). To help managers visualize and develop in this area, organizations can create short video presentations providing examples of how managers can support learning for each of the three dimensions. While the overall level of support has been found to positively impact learning and transfer in a formal training context, the influence of these three dimensions of support on informal learning has not been directly examined. Next, we outline how managers can apply these three dimensions of supervisor support in both formal and informal learning contexts.

4.1. Direct assistance

Direct assistance is defined as active interventions and support provided by a manager to facilitate employees' learning goals. This includes:

- Helping employees prepare for training and setting goals for applying the acquired knowledge and skills to their jobs;

- Organizing employees' work or social contexts to optimize opportunities for application by assigning work that requires applying new learning; and

- Offering feedback on employees' progress towards training goals, to be followed by assessment of the success of initial attempts to apply the learning, and providing the necessary time and resources for application.

4.2. Guidance

Guidance is defined as the direction provided to help employees achieve their learning goals. This includes:

- Referring employees to additional sources for advice, sharing personal insights on applying the training in similar situations, and providing recommendations on the most effective ways to apply the acquired knowledge and skills to their jobs;

- Explaining how the organization can benefit from applying employees' informal learning, clearly communicating expectations relevant to the training, and providing tips for maximizing the learning experience; and

- Offering guidance that aligns employees' skills with organizational objectives and helps them successfully navigate the learning process. For example, when sales employees apply training by experimenting with different sales techniques, managers can review their experiences and outcomes in relation to sales expectations and offer suggestions.

4.3. Emotional support

Emotional support is defined as empathetic and encouraging assistance provided to support employees' learning goals (Govaerts et al., 2017). This includes:

- Expressing respect for employees' competencies acquired during training, actively listening to their challenges in applying new knowledge and skills to the job, and sharing personal experiences and feelings from similar situations;

- Showing genuine interest in employees' progress and experiences related to learning transfer, offering words of encouragement to persist in applying new skills, and recognizing the difficulties and challenges they may encounter during the application process; and

- Providing a supportive and understanding environment that acknowledges the emotional aspects of learning and that encourages employees to overcome obstacles and continue their learning journeys.

5. Support for formal learning and coaching for informal learning

Figure 1 illustrates how managers can support formal learning transfer as well as coach for informal learning. This includes the three

dimensions of supervisor support and the behaviors that encourage both formal and informal learning transfer. In addition, the intersection between the two circles indicates the synergies and overlap in managerial behaviors that can encourage both formal and informal learning transfer. Finally, the learning climate serves as a broader context that is both influenced by supervisor support and constrains how managerial support can affect employee learning.

There are various types of coaching, including supervisor coaching and peer coaching. Workplace or executive coaching can be defined as "a one-to-one learning and development intervention that uses a collaborative, reflective, goal-focused relationship to achieve professional outcomes that are valued by the coachee" (Jones et al., 2015, p. 250). Although the workplace coaching relationship is typically distinct from formalized organizational performance-management relationships (e.g., supervisor-subordinate; Feldman & Lankau, 2005), we focus on the supervisor as a coach. This coaching includes managerial strategies and tactics to encourage learning on the job and facilitating transfer from informal learning. Focusing on helping an employee meet developmental goals is appropriate given that in a recent survey, 51.4% of companies reported using on-the-job coaching by supervisors or peers (Ho, 2016).

When considering the manager as a coach, we may think of coaches in sports and the responsibility they have for the learning and development of players on their team. Tim Baldwin enjoyed sports, frequently playing basketball and softball. He especially enjoyed the social interaction of being on a team and was beloved by his teammates. Tim often talked about how sport coaches could provide great insights on ways to facilitate transfer from practice to games. In fact, at one point he discussed with his coauthors an idea to do a coaching study on the lessons that could be learned from sport coaches. While this study did not come to fruition, it inspired some of the concepts that were incorporated into this article.

While the coach-player relationship does not share all the features of an employment relationship, we believe it provides some helpful illustrations for how managers can coach employees in their learning goals related to the three dimensions of support. In terms of preparing for formal learning and training (e.g., practices), coaches like the late great John Wooden provided direct assistance by identifying each player's strengths and weaknesses (Nater & Gallimore, 2006). Another Wooden principle relevant to

guidance and motivation was to help the basketball player understand the futility of comparing oneself to others. Instead, his developmental focus was on the player becoming the best that one could be at the tasks being asked of that player, whether that be shooting or passing the ball. One of his statements was, "Success is the peace of mind which is a direct result of the self-satisfaction in knowing that you have made the effort to become the best of which you are capable" (Nater & Gallimore, 2006, p. 25). Similarly, managers can encourage their employees to fulfill their potential by continuing to grow and learn.

Wooden supported players' motivation to learn by positive reinforcement and by modeling the expected actions the players should take in given situations. He preached and delivered immediate correction of errors during practice to create confident learners. Wooden strongly felt that players had to show tangible signs that learning had occurred through demonstrating their learning in practice before successfully transferring the learning to the games. Therefore, his practices focused on helping them be prepared to transfer their learning through repetition, positively conveying information on how to respond in different situational contexts, and having the players test out the things that had been learned (Nater & Gallimore, 2006). Managers can emulate this in the training and workplace context by providing practice opportunities.

In the realm of informal learning, Wooden used the off-season to research different ideas around basketball tasks such as rebounding and shooting, and he encouraged his coaching staff and players to do the same (Gallimore & Tharp, 2004). The philosophy of learning that he followed, and that he encouraged both his players and assistant coaches to follow, is captured by the quote: "When you improve a little each day, eventually big things occur ... seek the small improvement one day at a time. That's the only way it happens — and when it happens, it lasts" (Wooden, 1997, p. 143). Likewise, managers can adopt a gradual but lasting approach to training transfer, including by learning their orientation mindset (Chiaburu et al., 2010).

Coaches can enact many informal learning strategies for players to continuously learn. They can offer indirect assistance by creating opportunities for players to learn from one another by bringing in more experienced players to offer guidance to the younger players. Or a coach could recommend someone that a player could model and help find game film to watch and learn from. Coaches can also provide guidance by reviewing game or practice

footage, debriefing with the players, and offering insights on areas where they can improve their play. Furthermore, coaches can provide emotional support by empathizing with players' challenges and reassuring them that learning through trial and error is a normal part of the learning process. By fostering a supportive climate and learning environment, coaches of players and employees alike can empower and inspire continued learning and development of skills. The next section discusses strategies for maximizing training effectiveness, which then leads to our framework of specific steps that managers can take to encourage informal learning and support the transfer of learning to the workplace.

6. Strategies for maximizing training effectiveness

To maximize training effectiveness, three best practices or strategies include identifying needs before training, enhancing the right motivation mindset for learning during the training and development, and ensuring transfer after training (Salas et al., 2012). For example, Promote International encourages a high-performance learning journey in which managers are involved in supporting employees before, during, and after a learning event. The company develops job aids for managers to provide ideas for what, how, and where they can be involved in the learning journey of their employees (Brittain-Catlin, 2019). Several of these recommendations are highlighted next.

6.1. Before the learning event

Before the learning event, do the following:

- Conduct a needs analysis, which includes a task and person analysis to identify strengths and areas in need of improvement;

- Prepare the learning climate to set the stage for learning (Salas et al., 2012); and

- Ensure everyone knows what the upcoming learning event focuses on so that leaders can support the learning process.

6.2. During the learning process

During the learning process, do the following:

- Build learner self-efficacy and promote a learning orientation to enable the right learning mindset (Chiaburu et al., 2010);

- Boost the motivation to learn and transfer (Bauer et al., 2016). For example, explain why learning a communication skill will be important and how it can be applied in the workplace; and

- Help employees to have a mindset to transfer or apply what they are learning.

6.3. After a learning event

After a learning event, do the following:

- Remove any barriers to transfer, like peer pressure, and ensure there are opportunities to apply new knowledge and skills immediately on the job;

- Encourage the use of performance debriefs after the learner attempts to apply the new knowledge and skills to the job, and reinforce the continued use of these new skills (Salas et al., 2012); and

- Provide the tools and support needed by the learner to transfer skills to enhance job performance.

7. Framework for supervisor support of informal learning

In addition to these best practices for formal training, the three strategies for facilitating learning through assessing needs, motivating the learner, and facilitating transfer are applicable when examining how managers can support informal learning. We posit a framework with three support dimensions (i.e., direct assistance, guidance, and emotional support) and three strategies (i.e., addressing learning needs, motivation to learn, and application of learning) for how supervisors can encourage informal learning and enhance transfer of informal learning behaviors to maximize job effectiveness. Table 1 presents this organizing framework that produces nine cells or best practices that managers can employ. In this section, we discuss the tactics relevant to each of

the three types of supervisor support and the three strategies.

7.1. Direct assistance

Supervisors can provide specific direction in creating a learning plan by jointly identifying employee learning needs from both informal discussions as well as any formal performance reviews. For example, if a manager notices a skill deficit or area of growth potential in presentation/communication skills, the manager could jointly set goals with the employee, provide resources to improve via self-directed learning, and discuss opportunities for guided practice or application of these skills to different job situations.

Managers can also directly assist employees by making efforts to increase their motivation to learn and develop in specific areas. Gaining knowledge or building skills takes time, so providing the resources and time to get the most out of informal learning helps employees to grow. For example, one can increase motivation by identifying how developing a skill will add value to the organization and increase the chances of promotional opportunities.

When considering how to support or coach someone to apply what they learn, managers can identify or create opportunities to apply newly learned knowledge or skills. Direct assistance involves meeting to discuss goals and how things went as the employee applied recently acquired skills. Discussing these goals and holding debriefing sessions about observations in the workplace are examples of how managers can coach through direct assistance (Salas et al., 2012).

7.2. Guidance

Supervisors can play an important role in providing guidance and advice to employees as to the strategic direction of the company and how that direction may impact their individual jobs. They can then give their insight into what knowledge and skills the organization will need given its changing conditions and future direction. For example, managers can explain the organizational value for new learning in soft-skills training, as well as what is in it for the learner.

One estimate is that as many as 375 million workers globally, or about 14% of the workforce, will need skill upgrades by 2030 (Manyika et al., 2017). In this role, managers can lead discussions around the need for new skills, the practicality of enhancing existing skills, and how this focus connects with both the company's and the employees'

futures. Managers can also help jointly clarify the path needed as well as expectations for success to enhance motivation for informal learning.

Once an employee is engaged in the process of gaining new knowledge and skills through informal learning, the manager can help the employee transfer these KSAOs by providing challenging job experiences that stretch the person relative whichever competencies are part of the informal learning goals. The manager can then offer tips on how and where to apply new learning as well as refer the employee to other sources (e.g., job experts) for advice on how to apply new learning to these challenging assignments. As one example, a manager can have a recently hired financial advisor observe and meet with more experienced advisors.

7.3. Emotional support

The supervisor's emotional support can help the employee better navigate the informal learning journey, from the identification of informal learning needs to persisting in their application of learning. First, when employees are in the process of identifying learning needs, managers can emphasize the need for mastery orientation and continuous learning (Chiaburu et al., 2010). They should acknowledge and express respect for the employee's current competencies while underscoring the developmental nature of the employees' needs assessment, thus mitigating employee apprehension that they are asked to remedy some skill deficiency or to prepare for the future of work. This will encourage employees to be open about what skills they need to become more successful at work. Managers can also acknowledge employees' agency in crafting their informal learning process.

Second, managers may enhance employees' motivation to learn by building their confidence around acquiring relevant skills and effectively applying them to work. Managers can adopt an optimistic outlook on employee learning, suggest to employees that they are in control of their learning, and reinforce their self-worth. These favorable beliefs can motivate the employees to adapt as they learn (Taylor & Brown, 1988). In addition, managers may offer their own experiences, telling employees about how they felt during similar learning journeys and the key takeaways from their own time on the job.

Finally, when employees are applying newly acquired skills to their jobs, managers' emotional support can maximize the likelihood that employees will persist in their continuous attempts at

using the new skills. They can start by showing interest in how things are going relevant to employees' application of new learning and then set up time to listen to employees' challenges in applying learning and discuss these challenges. As an example, for employees who are working on their negotiation skills, managers may frame the challenges as opportunities to further acquire relevant negotiation skills and to practice skill proficiency, thus encouraging employees to continuously improve when conducting negotiations for their jobs.

8. Pulling it all together

Learning and development require both formal and informal learning opportunities. Our three-by-three framework highlights best practices managers can use to encourage informal learning behaviors and to aid in the transfer of learning. In addition to the nine ways that managers can support informal learning and transfer of that learning, we discuss the following key recommendations for driving best learning practices:

- Look for ways to integrate and support both formal and informal learning;

- Develop a strategic learning plan (SLP) for each employee; and

- Create a positive climate for learning within your team and organizational unit.

As an example of a way this is implemented in organizations, Promote International works with other companies to assign managers to follow up with trainees after their formal training. The managers work with them over time as they apply this training and learn informally on the job (Brittain-Catlin, 2019, 2022). A customized learning plan is developed for each employee based on meetings between the manager and employee. One goal is to establish a climate in which employees are expected to apply their training and grow their skills via practice (Brittain-Catlin, 2019). When training is provided to entire teams or units, this can create shared experiences and enhance training outcomes. Additional recommendations regarding how to apply the above three learning practices are provided in the remainder of this section.

First, as indicated in Figure 1 by the overlapping circles, actions that managers take to encourage learning in the workplace can simultaneously support both formal training transfer and informal learning. If the goal is for employees to grow and develop certain knowledge or skills, this can and ideally should happen through both formal training and informal learning. A manager who considers how to increase an employee's motivation to learn can use similar strategies to motivate both formal and informal learning. In addition, for an employee working to improve presentation or communication skills, providing opportunities to apply both formal and informal learning in low-risk settings would be conducive for growth in this area.

Aside from how consistently the manager offers support across formal and informal learning, the amount of overlap and synergy between these types of learning depends on the skill content, as well as on the organizational context. In terms of skill content, some skills, such as learning how to use specialized software or to operate a machine, are less conducive to informal learning and require more formal training, including guided practice. But other skills, such as leadership or teamwork skills, include significant overlap between both the formal and informal learning processes, and they therefore require similar methods to provide assistance, guidance, and emotional support.

Second, the synergy between formal and informal learning can be facilitated by developing an SLP for each employee. This plan would be customized for each employee depending on their position and career goals, the current status of KSAOs and learning goals, and the availability of formal and informal learning opportunities (Salas et al., 2012). It would be up to the manager and employee to prioritize learning goals together and to decide together on the best learning approach. Considerations should include the content expertise of both the manager and employee on the KSAO being developed, as well as the manager's skill level for coaching in each of the three support areas (i.e., direct assistance, guidance, and emotional support).

Our framework provides the manager with ways to support and to coach the employee over time, and these can form part of the SLP. Some ideas could include encouraging employees to use their downtime learning new skills, supporting blogs, chat forums, or other publication media to promote further learning, and specifying time during the work week to present or share ideas (LearnDash, 2018). Another option would be for managers to use large language models, such as OpenAI's ChatGPT, to help develop a personalized plan and to give customized feedback to employees. This may include, for example, giving

ChatGPT a scenario for an employee and asking it to develop a personalized plan, one with ideas for how to increase informal learning based on a job description or other detailed information.

The SLP can be used for integrating formal training and informal learning, for coaching for informal learning, and for considering how to promote a learning climate at the team level. Managers should develop SLPs at the individual level, but they should also recognize that group-level interactions will greatly affect the success of these individual SLPs (e.g., via peer support and the learning climate). Ultimately, the outcomes at the individual and group levels will influence organization-level performance and the extent to which a learning environment will be developed within the organization.

Third, Figure 1 highlights the important role of managers in building a climate for learning. Climate for learning can be defined as employees' shared perceptions of their units' policies and practices related to learning (see Schneider et al., 2013). In contrast to our discussions above that mostly focus on individual employees, climate for learning is a unit-level characteristic. Although the climate for learning may partly stem from organizational policies, managers can play an outsized role in influencing their units' climate because of their proximity to the employees. Specifically, they can affect both the level and strength of their units' climate for learning.

Aside from providing support to individual employees for their personal informal learning, managers should consider work activities and policies that increase the climate for learning. One way to promote informal learning is by making work fun (Tews et al., 2017). That is, managers may organize social events, team-building activities, and competitions at work, which signal to employees that the workplace is psychologically safe for them to explore and engage in informal learning. Other strategies include publicly celebrating and recognizing employees' achievements and personal milestones, especially as they relate to learning and the application of new skills. In terms of formal procedures at work, managers can also demonstrate commitment to continuous learning by incorporating opportunities to learn new skills in work assignments (Tracey & Tews, 2005). From a policy perspective, employees can be given greater autonomy to decide how to best achieve their work goals (Noe et al., 2017).

Managers should also recognize their role in facilitating the emergence of a learning climate. In general, activities leveraged at the team level, such as team-based learning activities and practices, can help employees come to consensus about the unit's climate. Managers can also incorporate ways for employees to share knowledge and offer each other support, thus fostering a sense of camaraderie around learning. For example, managers might sponsor lunch-and-learn sessions or create an online space in which to interact. Finally, while the level of guidance, assistance, and encouragement likely varies depending on individual needs, from a fairness perspective, managers should provide a reasonably consistent level of overall support across different employees.

9. Final thoughts

A primary sustainable advantage an organization can have is its ability to learn faster than its competitors (de Geus, 1988). This means that thriving requires a strategic approach to learning at an increasingly rapid rate across all levels to improve competitiveness and deliver effective products and services (Stewart, 2007). We have identified steps managers can adopt to support both formal and informal learning transfer via coaching and development, thereby helping the organization become a learning organization.

References

Apascaritei, P., & Elvira, M. (2022). Dynamizing human resources. An integrative review of SHRM and dynamic capabilities research. *Human Resource Management Review, 32*(4), 100878.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*(1), 63—105.

Baldwin, T. T., Ford, J. K., & Blume, B. D. (2009). Transfer of training 1988—2008: An updated review and new agenda for future research. In G. P. Hodgkinson, & J. K. Ford (Eds.), *International review of industrial and organizational psychology* (Vol. 24, pp. 41—70). Chichester, UK: Wiley.

Baldwin, T. T., Ford, J. K., & Blume, B. D. (2017). The state of training transfer research: Moving toward consumer-centric inquiry. *Human Resource Development Quarterly, 28*(1), 17—28.

Bauer, K. N., Orvis, K. A., Ely, K., & Surface, E. A. (2016). Re-examination of motivation in learning contexts: Meta-analytically investigating the role type of motivation plays in the prediction of key training outcomes. *Journal of Business and Psychology, 31*(1), 33—50.

Bell, B. S., Tannenbaum, S. I., Ford, J. K., Noe, R. A., & Kraiger, K. (2017). 100 years of training and development research: What we know and where we should go. *Journal of Applied Psychology, 102*(3), 305—323.

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management, 36*(4), 1065—1105.

Blume, B. D., Huang, J. L., Wang, Z., & Ford, J. K. (2023). Promoting transfer of hybrid training: Interaction of task-contingent conscientiousness and supervisor support. *Human Resource Development Quarterly, 34*(3), 265—287.

Brittain-Catlin, A. (2019, March). *Barriers to performance and approaches to address them*. Available at https://promoteint.com/wp-content/uploads/2019/03/Barriers-to-Performance-and-Approaches-to-Address-Them-1.pdf

Brittain-Catlin, A. (2022, April). *Stretching the dimensions*. Available at https://promoteint.com/sv/en/guides/design-more-effective-ld-programs-by-stretching-the-dimensions-2/

Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human Resource Development Review, 6*(3), 263—296.

Cerasoli, C. P., Alliger, G. M., Donsbach, J. S., Mathieu, J. E., Tannenbaum, S. I., & Orvis, K. A. (2018). Antecedents and outcomes of informal learning behaviors: A meta-analysis. *Journal of Business and Psychology, 33*(2), 203—230.

Chiaburu, D. S., Van Dam, K., & Hutchins, H. M. (2010). Social support in the workplace and training transfer: A longitudinal analysis. *International Journal of Selection and Assessment, 18*(2), 187—200.

Chopra-McGowan, A. (2022, March 1). Effective employee development starts with managers. *Harvard Business Review*. Available at https://hbr.org/2022/03/effective-employee-development-starts-with-managers

de Geus, A. P. (1988). Planning as learning. *Harvard Business Review, 66*(2), 70—74.

Feldman, D. C., & Lankau, M. J. (2005). Executive coaching: A review and agenda for future research. *Journal of Management, 31*(6), 829—848.

Ford, J. K., Baldwin, T. T., & Prasad, J. (2018). Transfer of training: The known and the unknown. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 201—225.

Ford, J. K. (2021). *Learning in organizations: An evidence-based approach* (1st ed.). Abingdon, UK: Routledge.

Gallimore, R., & Tharp, R. (2004). What a coach can teach a teacher, 1975—2004: Reflections and reanalysis of John Wooden's teaching practices. *The Sport Psychologist, 18*(2), 119—137.

Gardner, M. (2020, March 20). How to encourage informal learning in your organization. *Forbes*. Available at https://www.forbes.com/sites/forbesbusinesscouncil/2020/03/20/how-to-encourage-informal-learning-in-your-organization/?sh=46fe4f6f526b

Govaerts, N., Kyndt, E., Vreye, S., & Dochy, F. (2017). A supervisors' perspective on their role in transfer of training. *Human Resource Development Quarterly, 28*(4), 515—525.

Hastwell, C. (2023, April 21). Employee training and development: The benefits of upskilling or reskilling your team. *Great Place to Work*. Available at https://www.greatplacetowork.com/resources/blog/employee-training-development-benefits-planning

Herrity, J. (2023, March 29). The importance of training employees: 11 benefits. *Indeed*. Available at https://www.indeed.com/career-advice/career-development/importance-of-training

Ho, M. (2016, November 1). Investment in learning increases for the fourth straight year. *Talent Development*. Available at https://www.td.org/magazines/td-magazine/investment-in-learning-increases-for-fourth-straight-year

Hughes, A. M., Zajac, S., Woods, A. L., & Salas, E. (2020). The role of work environment in training sustainment: A meta-analysis. *Human Factors, 62*(1), 166—183.

Jones, R. J., Woods, S. A., & Guillaume, Y. R. F. (2015). The effectiveness of workplace coaching: A meta-analysis of learning and performance outcomes from coaching. *Journal of Occupational and Organizational Psychology, 89*(2), 249—277.

Kraiger, K., & Ford, J. K. (2007). The expanding role of workplace training: Themes and trends influencing training research and practice. In L. L. Koppes (Ed.), *Historical perspectives in industrial and organizational psychology* (pp. 281—309). Mahwah, NJ: Lawrence Erlbaum Associates.

Kruchten, P. (2008). The biological half-life of software engineering ideas. *IEEE Software, 25*(5), 10—11.

LearnDash. (2018, February 28). 6 ways to encourage informal learning in the workplace. *LearnDash*. Available at https://www.learndash.com/6-ways-encourage-informal-learning-workplace/

Manyika, J., Chui, M., Miremadi, M., Bughin, J., George, K., Willmott, P., & Dewhurst, M. (2017). *A future that works: Automation, employment and productivity*. McKinsey & Company.

Nater, S., & Gillimor, R. (2006). *You haven't taught until they have learned: John Wooden's teaching principles and practices*. Morgantown, WV: Fitness Information Technology.

Noe, R. A., Clarke, A. D. M., & Klein, H. J. (2014). Learning in the twenty-first-century workplace. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 245—275.

Noe, R. A., Tews, M. J., & Michel, J. W. (2017). Managers' informal learning: A trait activation theory perspective. *International Journal of Training and Development, 21*(1), 1—17.

Runnalls, B., Blume, B. D., Huang, J., Wang, Z., & Ford, J. K. (2023, April). Sink or swim? Empowering trainees for informal learning and transfer. In T. Bisbey, J. Olenick, & Chairs (Eds.), *Training as a multilevel, emergent phenomenon: A systems approach to better training [symposium]*. Boston, MA, USA: Society for Industrial and Organizational Psychology (SIOP) Annual Conference.

Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest, 13*(2), 74—101.

Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology, 64*, 361—388.

Stewart, T. (2007). *The wealth of knowledge: Intellectual capital and the twenty-first century organization*. New York, NY: Crown Business.

Tannenbaum, S. I., & Wolfson, M. A. (2022). Informal (field-based) learning. *Annual Review of Organizational Psychology and Organizational Behavior, 9*, 391—414.

Tannenbaum, S. I., Beard, R. L., McNall, L. A., & Salas, E. (2010). Informal learning and development in organizations.

In S. W. J. Kozlowski, & E. Salas (Eds.), *Learning, training, and development in organizations* (pp. 303—332). New York, NY: Taylor & Francis Group.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*(2), 193—210.

Tews, M. J., Michel, J. W., & Noe, R. A. (2017). Does fun promote learning? The relationship between fun in the workplace and informal learning. *Journal of Vocational Behavior, 98*, 46—55.

Tracey, J., & Tews, M. (2005). Construct validity of a general training climate scale. *Organizational Research Methods, 8*(4), 353—374.

Wolfson, M. A., Tannenbaum, S. I., Mathieu, J. E., & Maynard, M. T. (2018). A cross-level investigation of informal field-based learning and performance improvements. *Journal of Applied Psychology, 103*(1), 14—36.

Wooden, J. R. (1997). *Wooden: A lifetime of observations and reflections on and off the court*. Chicago, IL: Contemporary Books.