

Challenges of Learning in the Flow of Work: Scaffolding Self-Direction

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Modern talent development practitioners are confronted with opposing visions of how to support learning. Thought leaders advise them to make curated resources available rather than design formal training and education courses. Employees, however, seem to want and need guidance, and many are not prepared for self-directed learning. While the learning and development team (L&D) may be providing a richer array of resources than ever before, development efforts cannot achieve their goals when those resources are never accessed or are not well-utilized. To attempt to get at the root of this dilemma, this article reviews research-based factors that enable self-directed learning and explores the ways that the insights found in the literature can provide a foundation for scaffolding self-directed learning in the workplace. While the primary purpose of the article is to provide guidance on supporting self-direction in the workplace, the article also provides a reflective account of scholarly practice, wherein a practitioner consults the literature, defines guidelines on that base, implements them in practice, and refines them as needed.

Introduction

In modern organizations, learning and development (L&D) practitioners are encouraged to avoid formal training when possible and instead to support development in other, more informal ways (Cross, 2007; Hart, 2015). In practitioner circles, that advice has contributed to the rising adoption of specific non-training development strategies such as working out loud (Bozarth, 2014), social learning (Bingham and Conner, 2015), personal knowledge management (Jarche, no date), 70:20:10 strategies (Jennings, 2013), performance support (Gottfredson and Mosher, 2011), learning ecosystems (Rosenberg and Foreman, 2014), and learning environment design (Lombardozi, 2015) as well as other strategies that fall under the heading of informal learning. All of these strategies give learners more responsibility for what and how they learn. The goal is to allow employees to draw upon learning resources and to engage in productive learning ‘in the flow of work’ through on-the-job learning and ‘in-the-moment’ quick study. While there are many advantages to this approach to supporting learning, tensions remain. Organizations may be concerned about the extent to which employees can actually benefit from informal, self-directed development activities (Corporate Executive Board, 2014), and L&D practitioners are sometimes disappointed by the lack of uptake of their carefully curated resources and opportunities for peer-to-peer learning (Pontefact, 2015; Tracey, 2014).

In all of these emerging strategies it is clear that organizations are asking employees to be much more self-directed in developing the knowledge and skills related to their jobs. This is an important insight, since some of the challenges of relying on non-training solutions to support employee development in organizations are driven by people’s lack of experience with managing their own professional learning (Corporate Executive Board, 2014; Grow, 1994). Accordingly, when the author crafted a learning environment design framework (Lombardozi, 2015) to give

guidance on supporting learning with more flexible non-training resources, it was clear that advice on supporting self-directed learning needed to be part of its recommendations. Self-directed learning is a topic that is often theorized and researched in human resource development (see for example, Confessore and Confessore, 1992; Merriam and Bierema, 2014), so it is that literature to which the author turned to inform an understanding of self-directed learning, its prerequisites, and the ways L&D professionals can best enable employees to manage their own learning.

This article documents a scholarly practice approach to supporting self-directed learning in the workplace and reports emerging recommendations. Grounding practice in an understanding of the literature is the essence of scholarly practice, and scholar-practitioners have been given solid advice on how to use theory and research to inform practice (see, for example, Clark, 2005; Ruona and Gilley, 2009; Short and Shindell, 2009). The process of scholarly practice involves seeking out appropriate literature (not necessarily in a systematic review), interpreting that literature for use in practice, translating key principles into relatable language and do-able actions for other practitioners to follow, engaging in reflection to evaluate the practicality and effectiveness of what is happening in practice, and sharing additional recommendations with the practitioner and academic communities. When confronted with the need to support self-directed learning in the workplace, the author used scholar-practitioner practices to guide her response.

While the purpose of this article is primarily to document recommendations for supporting self-directed learning in the context of relying on non-training strategies to develop needed knowledge and skills in the workplace, the article is structured to illustrate a case study in scholarly practice. In her book on learning environment design (Lombardo, 2015), the author documented key elements or “pillars” for self-directed learning and high level recommendations for scaffolding self-directed learning in the workplace. The author has since shared these recommendations at conferences, integrated them into graduate classes in L&D, and applied them in consulting situations.

This article expands on and advances the recommendations for supporting self-directed learning in the workplace. First, it summarizes the original pillars and recommendations drawn from the literature on self-directed learning and related topics. Next, the author reports on feedback related to these recommendations that has been informally shared by clients, workshop participants, and graduate students (often practitioners). Additional feedback was obtained from a small sampling of practitioners who are trying to enable self-directed learning in their organizations. This was to explore the wider applicability of the self-directed learning recommendations and to determine additional nuances that might be incorporated to guide practice. Finally, the author suggests enhanced recommendations based on this feedback.

The Process of Self-Directed Learning at Work

To derive what is needed to support self-directed learning at work, it is useful to take a close look at self-directed learning theory, which has a fairly long history of theory and research. Seminal theories (see, for example, Ajzen, 1991; Candy, 1991; Confessore and Confessore, 1992; Knowles, 1975; Ryan and Deci, 2000; Spear and Mocker, 1984; Tough, 1979) identify a range of activities in which individuals engage for self-directed learning including: determining their own goals, making learning plans, figuring out how to obtain necessary resources (space,

equipment, funds, time), implementing the identified strategies, and evaluating outcomes. These activities are usually initiated by some triggering event that highlights a need for learning. Triggering events might include anticipating a job change, recognizing a need for deeper skill, getting feedback that warrants action, experiencing a disorientation about one's identity or skills, or simply becoming curious about a topic.

In addition, several theories related to learning in a work context can be consulted to add nuance to the process of self-directing learning. Seminal work on informal learning (Marsick and Watkins, 1997; Marsick, Watkins, and Lewin, 2010) theorizes a set of activities similar to self-directed learning. Informal learning activities include recognizing a problem or opportunity, sorting out meaning, identifying learning needs, acquiring needed knowledge or skills, applying those skills, assessing consequences, and extracting lessons for the future. Emphasis is placed on the thought processes required to make meaning of problems, sort out how to apply solutions, and solidify lessons learned. Attention to the reflection and meaning-making process can also be seen in experiential learning theory (Jarvis, 2006; Kolb, 2014), which tries to explain how people learn from experience, an important work-based learning activity which is usually self-managed. Experiential learning involves reflection, meaning-making, planning for application, and experimentation. Additionally, Boyatzis' intentional change theory (Boyatzis, 2006) positions identity development as a learning trigger and also highlights a dimension of experimentation and practice in the learning process.

A Framework for Self-Directed Learning at Work

As noted earlier, interest in self-directed learning stems from a desire to support employees who are managing their own learning within a rather vast ecosystem. (In practitioner parlance, a learning and performance ecosystem encompasses the sum total of physical and digital resources, performance support, human networks, social interactions, enterprise social networks, formal education opportunities, development processes, talent management systems, on-the-job learning, and more (Lombardozzi, 2015; Rosenberg and Foreman, 2014).) In general, practitioners don't often delve into theory and research that deeply, and they appreciate having key points synthesized and distilled for them (Moats and McLean, 2009). Self-directed learning theories offer insights that learning professionals can use to consider the kind of support employees may need when their development is supported by non-training solutions (working out loud, experiential learning, social learning, etc.). At the core, the activities of self-directed learning in the workplace can be summarized this way:

- Recognizing a learning need (for new knowledge or skill, or to deepen an existing knowledge base or skill set).
- Seeking resources and activities that appear to be helpful in developing the identified knowledge or skill. Generally, learners start with what is immediately at hand (e.g. search engines, organizational resources, peers close by).
- Selecting and engaging with particular resources and activities and (ideally) gaining knowledge or skill. This statement is deceptively simple, as it entails engaging in some learning activity (reading an article or book, watching a video, talking to a colleague, experimenting with an action) and thinking through what it means for how one should act in the future. While some learning needs are addressed by accessing only one resource,

many learning needs require learners to engage with multiple resources spread out over time.

- Acting in context, applying learned knowledge and skills — and noticing the consequences of his or her actions.
- Self-assessment whether one’s knowledge and skill has reached a sufficient level *as defined by the learner*. Assessment is based on reflection, feedback (from people or from other environmental clues), and learner’s own criteria for success.
- As long as any learner is unsatisfied with his or her level of knowledge or skill, he or she continues to seek resources and activities and engage with them. This can continue through multiple cycles of search, learning, and application that unfold over time.

Challenges to Self-Directed Learning at Work

Learning and development practitioners would be wise to consider all that is involved in these activities. For example: How do learners know they have a learning need? Do they have the skills and access needed to find and select resources? What is the quality of the resources and activities learners access? Who are the people who learners rely on to teach them and to provide other learning support? How are these interpersonal connections made, and are these people giving effective support? How effectively do employees learn and apply on their own? On what basis are they deciding they have learned “enough”? These are all potential stumbling blocks to effective self-directed learning. And there is another dynamic at work: learning needs come in a wide variety of shapes and sizes. Some are simple knowledge and skill gaps that are easily addressed. Others, however, are more complex or nuanced, the kinds of knowledge bases and skill sets that require sustained attention over long periods of time. Multiple waves of searching for resources, engaging in learning, and attempting to apply that learning may be interrupted with other responsibilities and activities. Certain learning activities may require developing relationships, finding application opportunities, or acquiring the skills needed to access the materials or activities (e.g. internet savvy) — all of which require interim steps before the learner can engage in the activity. In current practice, employees’ self-directed learning at work is less planful than we would like to believe (Corporate Executive Board, 2014). The whole process is often iterative and choppy.

Knowles (1973) posits that a fundamental attribute of adult learners is that they are self-directed. Indeed, it is often said that learning is natural, and people often point to the ubiquitous strategies of “Googling” the internet or searching specifically within YouTube as evidence that everyone knows how to access learning resources and apply what they learn to immediate questions and problems. Practitioners in the author’s graduate courses and consulting engagements, however, often dispute the assertion that learners are capable of finding for themselves because their experience tells them that employees at all levels and ages are more likely to want to be “spoon-fed” information and guided through formal courses and structured activities. Even those organizations that have created rich learning environments (curated resources and networks) have recognized that enabling self-directed learning is not so simple (Corporate Executive Board, 2014). Many report that resource databases and enterprise social networking sites are not being accessed by employees, and employees report that their development needs are not being attended to in organizations.

This raises a question as to whether employees are ready for self-directed learning. This question has been of interest for some time in the literature, and several researchers have developed instruments that have been used in subsequent research (see, for example: Guglielmino, 1977; Oddi, 1986). The factors that have been identified as necessary include commitment (accepting responsibility for learning), attitudes (openness, self-efficacy, future orientation), and skills (study and skills, problem solving, tech savvy). While practitioners might explore these factors, many do not have the budget and time to use these validated assessments.

Informed by the self-directed learning literature and broader background in adult learning theory — as well as experience with some of the challenges of self-directed learning in work environments — Lombardo (2015) suggests that practitioners who want to employ a self-directed learning strategy should be concerned about a short list of pillars that “should be inherent in any effective learning environment” (p. 78). These pillars include characteristics in learners and characteristics of the environment in which they learn. They are: motivation, self-awareness, attention, intention, engagement, relationships, and space and time. These potential factors were selected based on the author’s experience with what were most apt to be problematic in the context of learning environment design.

Motivation. Employees have to want to learn a given knowledge base or skill, which may or may not be the case when it comes to the specific knowledge and skills the organization needs them to learn. In a work context, employees are motivated to learn by a desire to build job competence, career potential, personal rewards, individual and organization goals, stature, and a sense of belonging to a community, among other things (McClelland et al., 1953; Schein, 2008; Vroom, 1964/1995). Motivation to learn is also strengthened by relevance, benefits, community, and respect (Wlodkowski, 2008). Often, recognizing that knowledge and skill-building is tied to improved on-the-job success provides a degree of motivation to learn, but that may be hard for employees to see, and that source of motivation may be insufficient. Another challenge is that humans have many motivations, and their priorities shift.

Self-awareness. One of the triggers for learning in the workplace is recognition of a knowledge or skill gap (Knowles, 1975; Spear and Mocker, 1984; Tough, 1979). While this gap may be identified through explicit feedback, it is also based on the employee’s own analysis. Employees may believe that their work will be improved by strengthening a key skill. Or they may anticipate that new skills will be required as time goes on. As an employee engages in self-directed learning, he or she needs to be able to evaluate progress toward learning goals. Recognition of opportunity areas and the ability to evaluate one’s own progress both depend on self-awareness.

Attention. Work environments contain many potential distractions and it is easy for employees to miss noticing the details of behaviors they should be emulating, action steps they should be taking, and thought processes they should be following in the course of work. In order to learn in a dynamic work context, employees need to identify precisely what they should pay attention to so that they can more deeply learn the nuances of the work (Bandura, 1976).

Intention. While we often ‘pick up’ knowledge and skills unconsciously or incidentally, learning is most productive when employees have a clear idea of the problems and activities to which they will apply the learning. When learners approach a task or a learning activity with the intention to learn from it, they formulate specific goals and anticipate how they will apply what they learn. This can minimize what gets lost in attempting to transfer learning (Hutchins and Burke, 2007).

Engagement. Learning is improved through employees' degree of commitment, active participation, and persistence, and these in turn are improved by the degree to which learning resources and activities promote intellectual engagement (Sawyer, 2014). Among learning and development professionals, active learning techniques have long been accepted as more impactful than passive ones (Dirksen, 2012; Silberman and Biech, 2015).

Relationships. Despite the potentially solitary nature of self-directed learning, most people will seek to include others in their learning journeys – as role models, sounding boards, coaches, peer learners, teachers, mentors, and more (Bandura, 1976; Rock and Garavan, 2006). Seldom is deep learning accomplished without interpersonal interaction and often, tapping a network of peers and subject matter experts is the first strategy learners utilize when a learning need is identified.

Space and time. Every self-directed learning process described in the literature includes some form of reflection, which requires minimal distractions (head space) and time. For self-directed learning to flourish, employees must process their learning, think through application, and reflect on results (Kolb, 2014; Marsick et al., 2010). Stressful, noisy work environments are often not conducive to being able to gain insight, evaluate lessons learned, or plan next steps.

Scaffolding the Process of Self-Directed Learning

Having described these factors as important for the success of a self-directed learning strategy, Lombardo (2015) offers a quick “pillar strength assessment” (not validated) to guide practitioners to ask questions during the assessment phase of a project that would allow them to have a sense of the learners' degree of readiness for self-directed learning. For example, practitioners can explore whether employees have shown the wherewithal to assess their own strengths and weaknesses and define their own learning goals (self-awareness). They can also take a look at available learning materials and available feedback to determine how engaging and relevant they are for the learners (engagement).

Additionally, the framework proposes a brief list of specific actions to strengthen these pillars where needed (Lombardo, 2015), as shown in Table 1.

Feedback on the “Pillars of Self-Directed Learning”

Since the publication of the pillars for self-directed learning, the author has continued to use it to inform her consulting and has shared it with practitioners in graduate courses and conference presentations. To be specific, from January 2014 through May 2016, these concepts were discussed in some of the author's graduate classes (6 instances; 63 students), in conference presentations (2 instances, approximately 100+ participants), and in a full scale course on learning environment design (4 instances, approximately 55 students). Her consulting on learning environment design has been brought to bear in one client engagement (coaching managers and designers) and a number of follow-up coaching conversations with students and conference participants. Discussions in these sessions have brought forward a variety of practitioner concerns about readiness for self-directed learning, and the pillars in particular. Over time, she has particularly noted issues related to whether or not high-demand organization environments are conducive to self-directed learning. Practitioners are also often concerned about some of the skills needed to

To Strengthen this Pillar	Try These Tactics
Motivation	<ul style="list-style-type: none"> • Draw connections between knowledge, skills, work tasks, and success. • Enlist the support of formal and informal leaders to actively promote importance.
Intention	<ul style="list-style-type: none"> • Categorize resources by what people might be trying to do. • Select resources that are specifically relevant to the learner’s role or industry. • Suggest next steps when an activity is concluded. • Provide application suggestions and exercises. • Use contextualized examples, role-plays, and simulations.
Attention	<ul style="list-style-type: none"> • Point out what can be learned from specific activities and resources. • Advise learners on specific formal learning events for a given stage in their development. • Suggest reflection questions for readings and activities. • Seek out resources in the learners’ preferred formats (e.g., video, podcast, books, articles). • Provide different views of materials, depending on the learner’s role or level of experience.
Self-Awareness	<ul style="list-style-type: none"> • Provide self-assessment tools with recommended next steps. • Support learners in articulating goals for learning and application. • Document an activity guide for new-to-role learners. • Create a checklist for on-the-job training and coaching (what learners need to know).
Engagement	<ul style="list-style-type: none"> • Select resources and activities based on how engaging they are. • Ensure that at least a subset of resources and activities provide deep interaction and interpersonal communication. • Take an active role to generate discussion online.
Relationships	<ul style="list-style-type: none"> • Introduce learners to subject matter experts or each other. • Identify people to follow on social media, and suggest specific social media tools, shared repositories, and hashtags. • Recommend professional organizations and conferences. • Provide an expert directory. • Enable profile pages that give learners the chance to share both descriptive information and a little of their personalities. • Offer guidance to ensure that developer-learner pairs have effective interactions with each other.
Space and Time	<ul style="list-style-type: none"> • Incorporate resources into systems that employees need to do the work (integrated performance support). • Create a resource portal to make searching for resources more efficient. • Allocate sufficient time for learning when needed.

(Lombardozi, 2015: 87-88)

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Table 1: Tactics for Strengthening Motivation and Self-Direction

engage in self-directed learning, especially with regard to setting goals and finding appropriate resources. In preparation for writing this article, the author also specifically sought more detailed feedback from five learning professionals who were in the early stages of exploring learning environment design.

In these conversations, practitioners were asked to walk through the Pillar Strength Assessment in Lombardozi (2015) in order to obtain more immediate feedback on what might be confusing or missing in the list of pillars. The author also explored these practitioners' general sense of employee readiness for managing their own learning processes. Discussions in these contexts generally suggest that the guidance is useful; practitioners report that support for self-directed learning is needed and the pillars resonate with their experience. However, the guidance may not go far enough in helping practitioners support the kind of self-directed learning in the workplace that modern organizations demand. The following reactions were gleaned from these sources and activities.

Missing elements. Discussions revealed a short list of supportive elements for self-directed learning that practitioners suggested were missing from the list of pillars or underemphasized in proportion to their impact on people's ability to self-direct their learning.

- Learners are sometimes ill-equipped to identify the skills needed for success or for career mobility. They may be able to assess their own skill levels, but don't have the experience or foresight to be confident that they are selecting the right knowledge base and prioritizing the most important skills for self-development. They need more help from their managers and peer developers in understanding what is needed based on their experience and demands of the work.
- The most successful self-directed learners have an inner drive that is tied to their identity and their passion for a role or subject matter. This kind of motivation has a real impact on engagement in and persistence of self-directed learning and may be lacking in some learners.
- The process of self-directed learning often requires long-term efforts to locate resources and keep developing oneself over time despite occasional setbacks. Practitioners thought that persistence, therefore, was an important supporting element for self-directed learning that wasn't sufficiently articulated in the pillars.
- To benefit from self-directed learning — especially experiential learning aspects — learners need to be able to reflect on the implications of what they observe, the consequences of actions, the meaning of what they read or watch in order to be able to use all that as a guide for future action. Practitioners concurred that time and space for this kind of reflection is in short supply but also observed that this is a reality of the culture of their workplaces. Whilst the importance of reflection is embedded in the pillar of “space and time” it may not be getting enough attention
- Learners need to be connected to the right people for learning — on-the-job teachers/trainers and subject matter experts, and practitioners see interpersonal support as critical. They would welcome additional examples of how to help learners make the right connections.
- It takes some minimum level of capability for learners to access the resources (links, documents, people) they need to support their development. The framework assumes these kinds of internet and networking skills are in place, which is not always the case.

There may also be barriers of language, lack of baseline knowledge, and inadequate information literacy that get in the way. The learning environment design strategy described in Lombardozzi (2015) shows how effective curation can address this problem, but it doesn't talk about developing digital literacy.

- Employees need to access information in the flow of work, and practitioners worry that when employees don't find immediate help, they don't necessarily come back to that learning need when time permits.
- Practitioners report that employees don't take a more holistic view about how their longer term development goals can be pursued using a self-directed strategy. Scaffolding self-directed learning should, in practitioners' views, help learners take a broader, long-term view, perhaps including learning how to take ownership of one's own learning.

Cultural influences on self-directed learning. One senior leader commented on the gap between having knowledge of theories and models — and being able to effectively apply them. In some work settings, this gap can be large. As well, when discussing how to enable self-directed learning, practitioners frequently identify concerns about whether or not the *work environment* is supportive, which goes beyond the learners' self-directed learning skills and the availability of curated resources. Practitioners' concerns about having a strong culture for learning in the workplace included the following.

- Self-directed learning is frequently stymied by competing goals and priorities. The demands of producing work (whether clearly stated or culturally ingrained) sometimes limit the time and energy employees have for developing any skills that are not immediately required. Employees can feel resentful if they are expected to do a substantial amount of their work-related learning during non-working hours.
- The role of a direct manager is critically important in enabling self-directed learning; managers can create an environment richly conducive to learning. In contrast, too many managers behave in ways that actually create barriers to self-directed learning on the job.
- Learning resources, especially those available on the internet, often lack depth and nuance. Therefore, learners gain an incomplete understanding of what they seek to learn. Trying to learn 'just-in-time' often conflicts with the need to learn more deeply since it's tempting for employees to act on the basis of summarized bullet points found on the internet that don't go into important details.
- Learning is highly dependent on the willingness and availability of networks of peers and subject matter experts to share what they know (verbally, or by contributing to shared resources). In many organizations, the most skilled workers are the busiest so they may lack the time or appropriate incentives to engage in developmental activities with learners or to answer their questions. Some people in social networks may also lack confidence that they have enough expertise to be helpful to peers.
- Heavily regulated workplaces often need to keep careful records of learning activities and have to be very cautious about potentially inaccurate information being shared among employees. While learning from peers is likely to happen regardless, this concern about sharing inaccurate information through informal means may inhibit providing support for it.

Self-directed learning readiness assessment concerns. As noted above, Lombardozzi (2015) provides an informal assessment tool for self-directed learning readiness that asks practitioners to estimate the percentage of the learning group who would agree with statements that align with the pillars. Questions and hesitations shared by practitioners during discussion of the assessment tool highlighted their concerns about how the assessment is structured.

- In the Lombardozzi (2015) assessment, practitioners are asked to estimate the percentage of learners who would respond positively to a series of “I” statements. It was difficult to consider statements framed as “I” when that “I” was meant to refer to the employees and not the person completing the assessment. Trying to imagine what other employees are thinking was difficult, and practitioners also worried that employees did not always have an accurate view of their own strengths and opportunities in these areas.
- Those who attempt to complete the assessment are also concerned about the fact that learners have different levels of readiness and varying needs to scaffold their readiness in the given context.

Implications

The pillars for self-directed learning offered in Lombardozzi (2015) resonate with the practitioner perspectives in the author’s client organizations and courses. In deeper discussions, however, they point to particular concerns that are not explicitly addressed in the pillars — additional considerations or factors that ought to be explored as well.

The feedback suggests that it would be useful to expand the pillars to include persistence and resourcefulness, and it might be important to separate the “Space and Time” pillar to more strongly highlight reflection as a critical learning skill. Other feedback points add depth and context to the discussion of pillars already identified (self-awareness, motivation). Table 2 summarizes a revised list of pillars.

The feedback on the cultural implications of self-directed learning is addressed as part of the broader learning environment design framework in Lombardozzi (2015). That framework has guidance on strengthening management’s developmental practices (e.g. coaching, encouraging peer-to-peer learning), supporting social learning (developmental relationships), and providing effective curation (identification of the most useful resources). It is outside the scope of this article to detail those recommendations here.

The self-directed learning readiness assessment offered by Lombardozzi (2015) may also have limited usefulness because of its structure and the variety of levels of readiness one will find among a group of learners. Learning environment design itself scaffolds learning, and designers can select from the actions in Table 1 to further support readiness. Designers will need to use their assessment skills and judgement to determine if there are particular areas that require emphasis. Being aware of the pillars gives designers additional factors to explore in the assessment process so that they can make useful recommendations regarding the features of a learning environment to address the identified learning needs. (Of course, a front-end needs assessment goes well beyond that scope, exploring all of the areas necessary to understand the context, knowledge base, skill sets, learning needs, learner characteristics and more.)

Pillars	Description
Motivation	Learners value the development of this particular knowledge base or skill and are willing to invest in learning more.
Self-Awareness	Learners have the wherewithal to assess their own strengths and opportunities in this knowledge base or skill. (That is, they know what they need to learn and will be able to tell if they have learned it.)
Attention	Learners know specifically what is important to learn in this knowledge base or skill and know what to look for when they engage with learning resources.
Intention	Learners will know where they will be applying this knowledge base or skill.
Reflective Practices	Learners have the capacity to make meaning from the resources and activities they encounter.
Persistence	Learners will likely push through any barriers and continue developing themselves over time if needed.
Resourcefulness	Learners have the capability and savvy to locate and vet resources that are relevant and useful.
Relationship Strength	Learners know who they can go to for assistance, and those people are willing to help.
Engagement	Learners have access to materials that are relevant, interesting, interactive, and memorable.
Time	Learners have time to pursue learning during the workday.

Table 2. Revised Pillars for Self-Directed Learning

Summary

We live in a world of learning resource abundance especially for those individuals who are able to take advantage of the vast cache of potential learning materials accessible through the internet. However, abundance can lead to paralysis and inefficiency, and learning leaders have taken on the role of “curators” in order to guide people to the most useful resources for their purposes and context. But educational systems typically continue to employ fairly structured approaches to teaching, and employees in the workforce of all ages may not actually have developed the needed self-directed learning skills, regardless of their facility with digital tools and familiarity with the internet. In addition to curation, then, learning leaders can support individual learning needs by identifying and scaffolding weak areas in learners’ abilities to manage their own development as well as weak areas in the learning culture of the organization. This article has outlined some of the specific considerations that may need to be scaffolded. The challenges of self-directed learning in the workplace are not going away, and tools and techniques for supporting learning continue to emerge. The frameworks for understanding self-directed learning should continue to morph to address modern challenges.

In addition, the article outlines an example of scholarly practice that involved using the literature to draft a framework (pillars for self-directed learning), employing that framework in practice, and then using feedback from those experiences to further refine the framework. In practice, this mix of grounding in theory and research and incorporating lessons of experience is a typical approach to

scholarly practice (Scully-Russ et al., 2013). This case illustrates the value of continuously refining practices even after they are reified. It is hoped that this article contributes to the body of knowledge around how scholarly practice is enacted in learning and development in the workplace.

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