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THE JOURNEY FROM FORMAL LEARNING TO PERFORMANCE SUPPORT

Twenty years have passed since Gloria Gery first introduced performance support (PS). Rather than sending employees through hours, day or weeks of upfront training, Gery argued that we could instead provide them with “individualized on-line access to the full range of...systems to permit job performance” (Gery, 1991, p.21). This intervention opened up the possibility of providing real-time support to employees were performing their job rather than sending them to formal learning events disconnected from the work. Fortunately for us, this pipe dream is now possible -- more than ever before.

Evolving landscape

The training and performance improvement world has changed markedly since Gery’s initial foray into performance support. Training has evolved from a brick & mortar classroom paradigm to a heavy reliance on anytime, anywhere eLearning to a blending of the two. We have also witnessed the emergence of Web 2.0 technologies that enable the rapid creation of information and learning content from anyone including learners themselves. The performance improvement field has become much smarter about how to most effectively design and implement performance support through best practices and evidence-based research (Gal & Nacmias, 2011; McManus & Rossett, 2006; Nguyen & Klein, 2008; Nguyen, Klein & Sullivan, 2005; Rossett & Shafer, 2006).

It’s now possible for learning organizations to transform into performance support organizations. In other words, rather engaging stakeholders with training interventions first, we can and should seek to provide customers with performance support as a primary solution. By doing so, a performance support organization can focus on providing any support required while employees are *on* the job rather than before or outside of the workplace.

In this article, we will explore a case study of an organization that consciously evolved from a formal learning to performance support. We will refer to this organization as *The Group* for purposes of anonymity. We will examine the impact that *The Group’s* transition has had on its organizational metrics and business impact. Finally, we will discuss steps on how your organization can also shift from a focus on formal learning to performance support.

Transforming a learning organization into a performance support organization

During the 1990's, *The Group* was a 100% classroom-based, instructor-led training organization. It recruited subject matter experts (SME) from the business for their mastery of software tools and business processes rather than instructional design or performance improvement prowess. These SME's traveled the globe and taught employees how the organization and its tools worked.

Shift to eLearning

Like many learning organizations during the dot come bubble, *The Group* shifted from exclusive dependence on instructor-led training (ILT) to eLearning accompanied by a blend of printable job aids and virtual sessions. *The Group's* subject matter experts would demonstrate procedures using eLearning and conduct practice sessions using virtual or brick and mortar classrooms. These changes met resistance from stakeholders who were more comfortable with "high-touch" learning such as instructor-led courses or on-the-job coaching.

Shift to extrinsic performance support

The Group was also responsible for performance support systems (PS) for a small number of proprietary, internally-developed software systems. The content within these PS systems was often redundant in relation to content developed for web-based training. By 2002, *The Group* developed an approach where learning objects originally developed for formal learning could be reused and integrated directly into work interfaces for on-the-job performance support (Nguyen & Hanzel, 2007). This methodology not only eliminated costs due to design and development redundancy, but also made it possible for *The Group* to drive integrated support, also referred to by Gery (1995) as *extrinsic* performance support, at a broad scale across the enterprise.

In 2004, new leadership refocused the organization from formal learning delivered outside the context of work to providing support directly where employees were performing their work: in the software interface itself. Early on, business partners within information technology (IT) were understandably resistant. Many initial reactions were, "Why would we want that?" To overcome this resistance and facilitate change management within the enterprise, *The Group* sought willing early adopters and software applications where it was technically feasible to embed performance support.

One key early adopter was a new purchasing tool that was intended for all employees across the company to use to procure anything from office supplies to factory equipment. After partnering with a human factors engineering (HFE) team to identify potential usability issues within the purchasing software, *The Group* recommended that extrinsic performance support be integrated within the application to assist employees while on-the-job. Though the owners of the purchasing tool were hesitant, they reluctantly allowed seven performance support links to be integrated into the application at its initial deployment.

Shortly after rollout, the IT help desk was deluged with technical assistance calls for the newly introduced purchasing tool. Upon further review of the help desk data, it was revealed that no technical assistance requests were submitted for the seven tasks where performance support had been integrated. As a result of this finding, the owners of the purchasing tool quickly and willingly agreed to an additional 20 points of performance support in the application. This small, early success gave *The Group* a tangible example to influence other IT teams to incorporate performance support in addition to traditional formal learning solutions.

In 2005, 13% of projects *The Group* engaged in *extrinsic* performance support. Through aggressive goal setting and change management with IT business partners, by 2007, 100% of *The Group's* projects which could technically incorporate performance support included this additional intervention. In just two year, many stakeholders reactions had evolved from strong resistance to eager adopters. Many requested, "I am going to get some of that help [performance support], aren't I?"

With performance support firmly established as an accepted intervention, *The Group* set a new strategic direction to provide extrinsic performance support integrated as its primary intervention. By doing so, *The Group* sought to minimize if not eliminate training for the company's software and processes.

The "Forgetting Curve"

The Group's motivation for this shift was grounded not just in economics but in educational psychology. Ebbinghaus (1885) found that learners forget information most rapidly after the conclusion of a learning event. Though the rate of forgetting slows over time, a learner will eventually forget all information that is learned unless it is practiced or used again in some way. Ebbinghaus called this diminishing retention of learning as the *forgetting curve*.

The Group's historical reliance on instructor-led training and then eLearning was strongly impacted by Ebbinghaus' forgetting curve. The organization had asked its employees to complete 1-2 hour web-based training courses or multi-day classroom courses before they could order parts from an online software tool, worked in the factory, or completed annual reviews for employees. This was in contrast to tools outside of the organization where one could renew an automobile license, purchase a new computer or even contribute knowledge without completing any kind of formal training.

Performance support becomes primary or sole intervention

In 2008, 3% of *The Group's* projects included performance support as the primary or sole intervention. *The Group* was able to shift 95% of its projects to performance support first by the end of 2011. Due to the fact that certain tools and processes may require some prior knowledge before employees could be allowed to use them, formal training was not completely eliminated. It is instead used as a secondary intervention in situations where business circumstances require it.

Impact of performance support versus formal learning

The Group's shift from formal learning to performance support, not only impacted employees and the nature of the products provided to customers, it also significantly changed *The Group's* impact on the business. While most learning organizations may focus on learning reaction or achievement (Kirkpatrick, 2006), *The Group* shifted its attention to transfer and performance.

Averaging across multiple projects, 97% of the company's employees reported that they were confident using enterprise software tools that include integrated performance support. Help desk data also revealed a significant reduction in technical assistance requests. For four key projects, only six of 1,200 help desk calls (0.0005%) were categorized as training-related. Over the course of 2011, more than 300,000 performance support requests were delivered to employees which resulted in an estimated productivity savings of \$2.6 million.

How your organization can transform

As illustrated in *The Group's* case study, there are many potential obstacles to overcome when transitioning from a formal learning organization to performance support. Here are several key strategies to overcome such roadblocks:

- Identify potential sources of cultural or organizational resistance and use transition change management practices to mitigate the resistance
- Find external research or benchmarking that will assist in you creating a compelling business case for how performance support will impact the business, employee, and customer
- Find early adopter(s) who are willing take a calculated risk with performance support and collect data to demonstrate the impact of performance support
- Find internal partners who might share a similar vision of the possible future
- Develop analogies and paint a vision that those within your learning organization, stakeholders, and customers can relate to
- Align your learning organization to the performance support vision. Coach the “visioners” to speak with a common voice, and have the courage to influence and face resistance to change
- Market and celebrate wins with your organization, partners and customers
- Communicate trend charts of progress against goals
- Share adoption rates and success indicators with different organizations and potential customers, thereby creating competition or *peer pressure* to drive adoption

Begin a Paradigm Shift

Historically, we have often thought about performance support as a complementary or supplementary intervention to training, providing support to employees *after* a learning event to reinforce key messages and remind employees of information they may have learned during training. As shown in Figure 1, a key paradigm shift as organizations evolve into a performance

support organization is to focus on the end first. Like *The Group*, we should focus first on the *after* phase by embedding as much support in or near the work as possible and then focus on interventions that can be provided to employees *before* any learning event. This may include communications, change management or even self-paced learning activities. If such interventions are not sufficient for closing the performance gap, we can finally resort to providing formal learning —instructor-led or eLearning.

Insert Figure 1 about here

Extend Learning. As discussed in Nguyen (2010), organizations should focus on extending learning *before* and *after* any learning event:

“We can address communication issues through blogs, podcasts, emails or even simple newsletters. We can capture the knowledge of experts or average employees using Wikis. We can intelligently provide information to users through performance support embedded directly into the software tools they use on a daily basis. We can even provide real time assistance to employees who may not be in a traditional office setting -- such as equipment technicians, warehouse operators or field sales – through performance support integrated into mobile devices and smart phones.” (p. 55)

Integrate Learning. It is also important to note that a performance support organization should seek to integrate PS as part of any formal learning that may be offered. For example, activities should challenge learners to solve authentic problems using the actual performance support tools they will have available on the job. Access to performance support during the assessment phase should not be viewed as a crutch, but as an instructional method to reinforce adoption, transfer and relevance of performance support.

The time is now

Performance support has been a known quantity for human performance technologists for over twenty years. However, the evolution of technology and the growing body of best practices around performance support present learning organizations today with an interesting opportunity.

One of the most widely held beliefs early on was that, by implementing a performance support intervention, we can reduce or even eliminate the amount of training that is necessary to address a performance problem (Chase 1998; Desmerais et al., 1997; Foster 1997). This notion of reducing training through EPSS and enabling “day-one performance” has been a major attraction for performance technologists (Gery, 1995). As demonstrated in this case study, it is possible to rely on performance support as a primary intervention. There may be instances where training can and should be used as a complementary intervention. Through rigorous needs analysis and identification of pre-requisite work skills, organizations can successfully use performance support systems to enable their employees and workforce.

References

- Chase, N. (1998). Electronic support cuts training time [Electronic version]. *Quality Magazine*. Retrieved January 12, 2005 from <http://openacademy.mindef.gov.sg/OpenAcademy/LearningResources/EPSS/c16.htm>.
- Desmarais, M.C., Leclair, R., Fiset, J.V., & Talbi, H. (1997). Cost-justifying electronic performance support systems. *Communications of the ACM*, 40(7), 39-48.
- Ebbinghaus, H. (1885). *Memory: A contribution to experimental psychology*. New York: Dover.
- Foster, E. (1997). Training when you need it [Electronic version]. *Info World*. Retrieved November 17, 2004 from <http://openacademy.mindef.gov.sg/OpenAcademy/Learning%20Resources/EPSS/c1.htm>.
- Gal, E. & Nachmias, R. (2011). Online learning and performance support in organizational environments using performance support platforms. *Performance Improvement*, 50(8), 25-32.
- Gery, G. (1991). *Electronic performance support systems*. Tolland, MA: Gery Associates.
- Gery, G. (1995). Attributes and behaviors of performance-centered systems. *Performance Improvement Quarterly*, 8(1), 47-93.
- Jennings, C. (2009). How not to train [Electronic version]. Retrieved January 18, 2012 from <http://www.trainingzone.co.uk/topic/learning-technologies/how-not-train>.
- Kirkpatrick, D. L. (2006). *Evaluating training programs*. San Francisco: Berrett-Koehler.
- McManus, P. & Rossett, A. (2006). Performance support tools delivering value when and where it is needed. *Performance Improvement*, 45(2), 8-16.
- Nguyen, F. & Hanzel, M. (2007). LO + EPSS = just-in-time reuse of content to support employee performance. *Performance Improvement*, 46(6), 8-14.
- Nguyen, F. & Klein, J.D. (2008). The effect of performance support and training as performance interventions. *Performance Improvement Quarterly*, 21(1), 95-114.
- Nguyen, F., Klein, J.D., & Sullivan, H. (2005). A comparative study of electronic performance support systems. *Performance Improvement Quarterly*, 18(4), 71-86.

Nguyen, F. (2010). Learning experience design. In Gottfredson, C. & Mosher, B. *Innovative performance support*, San Francisco: McGraw-Hill.

Rossett, A. & Schafer, L. (2006). *Job Aids and Performance Support: Moving from Knowledge in the Classroom to Knowledge Everywhere*. San Francisco: Pfeiffer.

Authors

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Figures

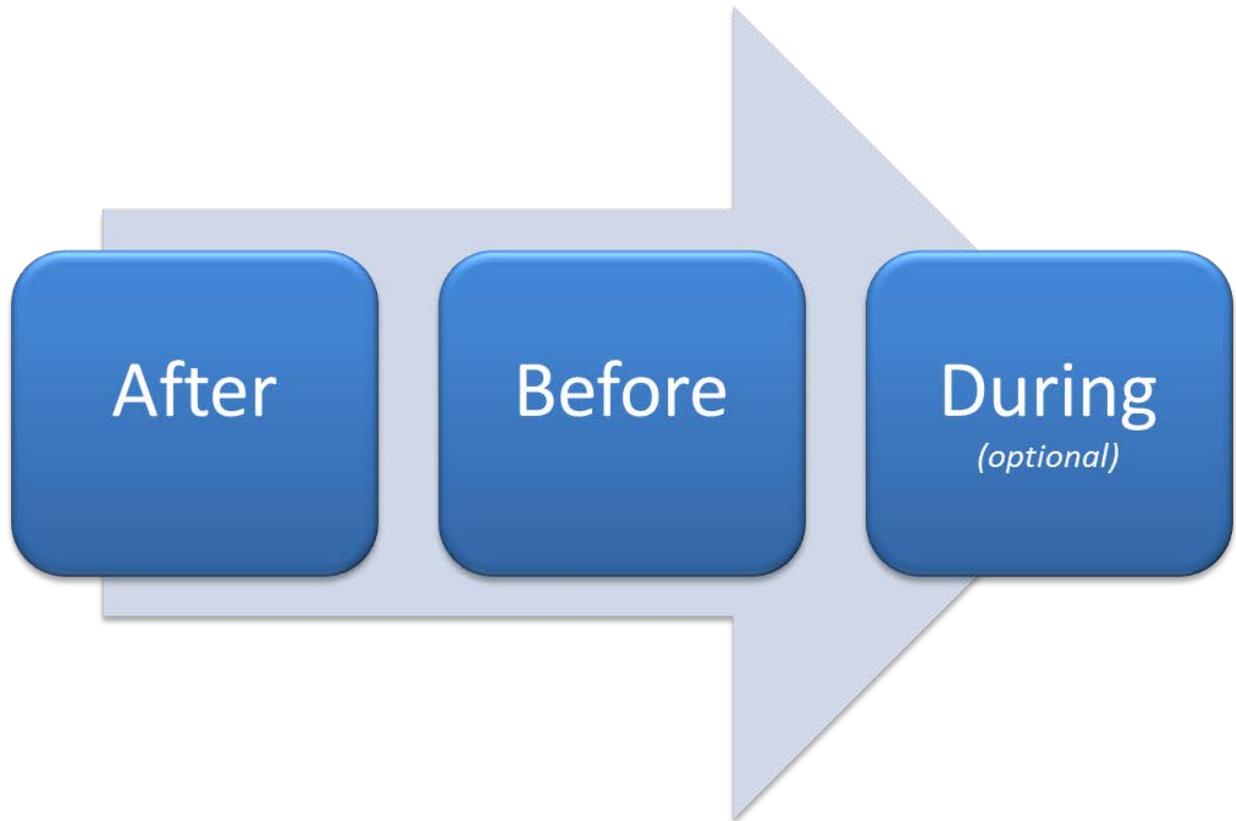


Figure 1. When to Focus on Performance Support