# THE SLOAN-C PILLARS: TOWARDS A BALANCED APPROACH TO MEASURING ORGANIZATIONAL LEARNING

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**ABSTRACT**

The Sloan Pillars have set the standard for university-wide online learning program assessment for more than a dozen years. In this paper, the authors propose the extension of the Pillars to corporate e-learning, offering an alternative to traditional enterprise learning assessments. Claiming that conventional methods stress individual courses or programs, rather than encompassing a company's learning ecology, a new corporate version of Sloan Pillars is proposed. The authors claim that their holistic approach—assessing employee access, learning and cost effectiveness, and learner and management satisfaction—provides companies with the tools they need to assess the effectiveness of company learning efforts overall.

**KEYWORDS**

Learning Assessment, Online Learning, eLearning, Corporate Training, Kirkpatrick Method, Sloan-C Pillars

## I. INTRODUCTION

In large corporations, education and training are recognized as necessary functions, but their value in many companies is fraught with ambiguity. As a rule, corporate management tends to be unclear about what outcomes are required. For some, training is introduced to support worker retention; in which case, education programs are considered an employee benefit falling under the arm of human resources. Alternatively, training may be called upon to improve job performance or enhance technical skills or specific training requirements may be imposed through government mandates; under these conditions, a company's training organization commonly manages the learning enterprise. These examples are merely two bracketing a much larger range of possibilities.

In the current economic climate of layoffs and restructurings, learning executives have never felt a more urgent need to rationalize or justify the value of education and training in advancing company interests. More than ever, corporate learning officers are now eager to demonstrate that their organization generates rapid and quantitative corporate benefits. For many, the wish to prove the value of corporate learning opens a search for an industry "standard," one that effectively measures the efficacy of learning programs. If outcomes are measured against a standard template to reveal quantitative results, and if outcomes are positive, learning departments say that their efforts deliver productive programs—or so the thinking goes.

It so happens that a widely practiced industry "standard" does exist—the Kirkpatrick method, originally proposed by Donald Kirkpatrick and first published in a series of articles in the *US Training and Development Journal* in 1959 [1]. It has been modified and updated many times since.

To evaluate the effectiveness of a learning program, the Kirkpatrick model outlines 4 levels of assessed outcomes:

*Level 1: Reaction*–Did employees like the learning experience?
*Level 2: Learning*–Did they absorb what they were taught?
*Level 3: Behavior*–Did they use what they were taught?
*Level 4: Results*–What is the impact of what they were taught?

While a complete program evaluation requires measuring all 4 Kirkpatrick levels, a valuable attribute is that each level provides useful, if partial, input towards overall program evaluation, even if all levels are not, or cannot, be measured. Kirkpatrick's method also has the advantage of being relatively intuitive and easy to understand. At a quick perusal, it seems quite logical and sensible. After all, who can reasonably oppose measuring a straightforward objective, such as, "Did they learn what they were taught?"

Originally, the Kirkpatrick model was introduced as a way to assess effectiveness of learning in manufacturing and similar industries, contexts widespread in companies of the day that promoted the "right way" of doing things. Successful training urged learners to do things the "right way." Modern versions of the old manufacturing-style training continue to be offered today, such as courses in basic quality principles (Six Sigma, for example), or training in the use of a new release of computer-aided design (CAD) software for engineers in a computer-chip facility. Yet another might provide instruction in the most efficient and safe ways of packing widgets coming off a production line. An assumption underlying Kirkpatrick's model is that what is presently taught is appropriate for current needs of the organization.

In the absence of other widely established standards, the model has been broadly adopted and extended by corporations and promoted by consultants as a gold standard against which to measure effectiveness of learning across an organization, including teaching complex behavioral, leadership and problem-solving skills—skills required at professional levels in today's complex, continuously changing business environment. Because the Kirkpatrick model assumes direct applicability between what is taught to what it is applied, it may not be accepted as an accurate measure by executives in assessing skills required in work environments in which the classroom version may be quite different from what is practiced on the job.

The Kirkpatrick model was designed primarily to examine the effectiveness of individual training programs, with the assumption that if you measure isolated Kirkpatrick outcomes of different courses one by one, you should come up with a good assessment of *learning effectiveness* and corollary objectives (such as *cost effectiveness*) across your entire organization, an assumption that needs to be examined.

## II. HOLISTIC APPROACH

The Kirkpatrick model is useful and appropriate for the many training programs. Nonetheless, there is a need for a more holistic approach to assess learning across organizations, including measuring the impact on a company's overall learning environment. Such a holistic approach needs to account for possibilities not foreseen when Kirkpatrick first conceptualized his model, such as the penetration of e-learning in corporate training.

While departments offering targeted courses are understandably interested in the impact of their own programs, still, individual programs need to be evaluated in the context of the organization as a whole. Instead of using a simple average or aggregation of Kirkpatrick results from all programs delivered, management needs to find a way of measuring the performance of the learning enterprise across the entire corporation. The effort must include understanding how separate programs interact with one another as well as how learning units perform in the environment in which the company does business. It must as well, include baseline assessment in order to establish a credible claim for improvements originating from a learning program.

In developing a more holistic approach, a few criteria need to be kept in mind. Successful assessment models, not only those covering training, usually feature simple, easy-to-remember factors, with easy-to-understand metrics and fairly limited accompanying data requirements. The Kirkpatrick model, whatever its shortcomings, is simple and intuitive. Verifying data must be easy to collect and analysis following data gathering must not only account for variables, but must be easy to understand.

With each "improvement" cycle over time, the original simplicity of the Kirkpatrick model has evolved into a highly complex set of variables in which statisticians are now called upon to collect and analyze datasets. Some, for example, integrate Level 4 results with financial records in an attempt to measure return on investment (ROI). The model is even employed in programs that deal with complex leadership and sales behaviors. Typically in these analyses, business-environment variables, such as the impact of marketing and seasonal variations, are held constant or, even worse, ignored. Routinely, resulting detailed complex analyses lead to derivations of ROI results that are often amazingly impressive but also frequently non-credible. (*Also see article "Measuring Success and ROI in Corporate Training" by Kent Barnett and John R. Maddox, II, in this issue.)*

## III. COMPLEMENTARY APPROACH: SLOAN-C PILLARS

In parallel with widely adopted technology-based methods of delivering corporate training, universities have been equally active introducing e-learning [2]. Reliable estimates indicate that today more than 5 million students are enrolled in degree-granting institutions across the US, taking at least one course entirely online. [3] These students represent approximately 25% of all those enrolled in American degree-granting institutions. The Sloan Consortium (Sloan-C), the professional society of institutions and individuals practicing e-learning, with special emphasis on colleges and universities, has promoted a different approach to assessment of quality education—Sloan-C Pillars.

Sloan-C Pillars recognize that much of organized education today is connected in some way to e-learning. Sloan-C Pillars also take into account that e-learning and other electronic methods must earn their way into widespread deployment by demonstrating their advantages to new learners through learning effectiveness, cost-effectiveness and learner satisfaction. In this paper, we propose the possible application of Sloan-C Pillars to corporate learning [4].

The 5 Sloan-C Pillars were originally devised to answer questions that must occur to every leader who manages online offerings in a learning organization: *How do I know I am operating a quality organization and how do I continually improve it?*

Four of the 5 Pillars were first presented at an academic conference in 1997 [5] and subsequently described in an interview published in 1998 [6]. The fifth Pillar—overall student satisfaction—was added a year later. The idea behind the Pillars is that a quality organization must do more than ensure that intended learning outcomes are achieved; it must also demonstrate success along 4 separate but interrelated dimensions. The original Pillars were intended for college and universities. In this paper, they are referred to as "Pillars A." The 5 elements in Pillars A are:

1. Access
2. Learning effectiveness
3. Cost effectiveness [7]
4. Faculty satisfaction
5. Student satisfaction

As already noted, a successful quality organization with ambitions to achieve continuous improvement must recognize that it cannot focus on *learning outcomes* only, as important as they are, but must assess itself along multidimensional axes, or "Pillars," on which the organization is metaphorically supported (Figure1). Because each element in Pillars A is equally important in supporting the structure, none can be

eliminated. While Pillars A represents a different approach than Kirkpatrick's model, the two are not directly opposed. Rather, they can be thought of as complementary. Embedded in the Pillars are elements of the Kirkpatrick model.

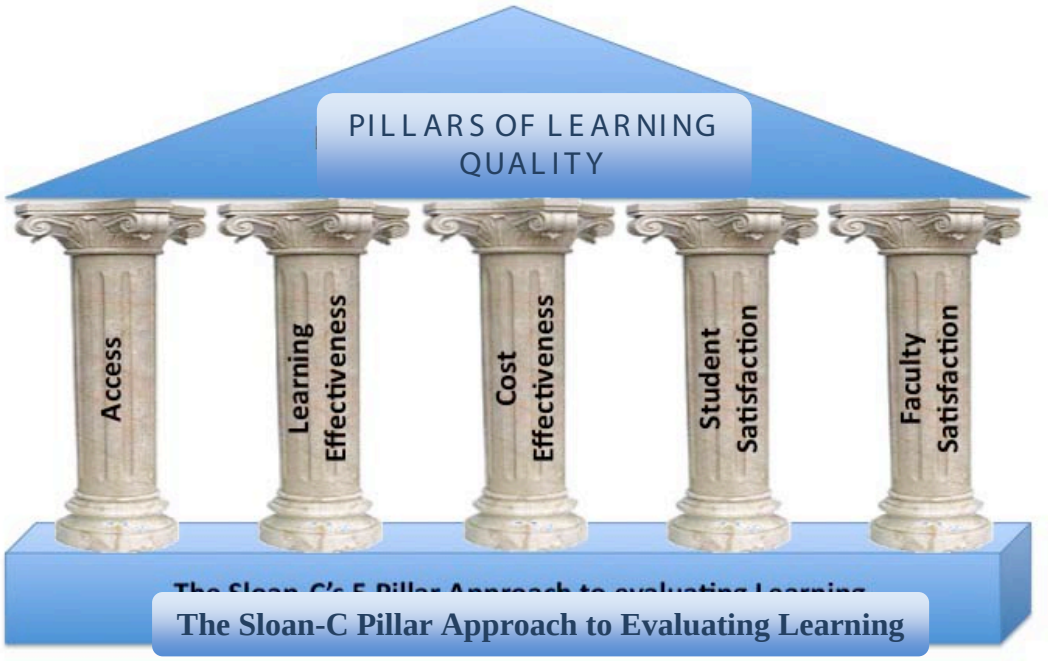


**Figure 1. Pillars A**

## IV. EMPLOYING SLOAN-C PILLARS

Let us now explore in more detail what the Pillars represent and what metrics might be used to evaluate performance of a learning organization against each pillar.

*Access* refers to the number of people engaged by learning programs. In organizations with substantial e-learning components, it is reasonable to ask why digital options are introduced at all. Given the extra costs that online courses require, if a significant new population, over and above those reached in traditional classrooms, is not added, why bother? How many new learners are being reached, and is that number sufficient to justify the technology expense? Access must also constructively address situations where there are multiple access points for learning programs within the corporation, such as employees who wish to access through mobile platforms.

*Learning effectiveness* is a way of inquiring whether learning objectives sought are met. Because "second rate" learning is intolerable, the criterion for success must be—"results equivalent or better than might be achieved in classrooms alone." It is quite possible that "better" is the more likely outcome when e-learning is deployed. Properly constructed, e-learning can do more for learner engagement than old-style classroom learning, but appropriate metrics need to be constructed to demonstrate that is in fact the case.

*Cost effectiveness* must also be carefully assessed to ensure overall costs are contained enough to enable programs to scale-up for widespread deployment. If merely experimental, small-scale learning programs are sustainable, or if learning outcomes deteriorate as you scale-up, the program is unacceptable.

Since virtually all online courses at colleges and universities are faculty-led, whether online or blended, it is critical to assess whether faculty are satisfied with their role. Under *faculty satisfaction*, if online instructors are not attracted to e-learning, it is a clear mark of failure.

Finally, it is necessary to assess *overall student satisfaction.* Deteriorating or low rates of student satisfaction will result in a gradual decline in enrollment, signaling impending failure.

If Sloan-C Pillars are introduced as benchmarking criteria and as methods to drive continuous improvement, then each pillar must measure success against a set of metrics. Benchmarking and quantitative measures of quality are not easily adopted by academic institutions, but there has been gradual progress with scattered examples of effective practices. In academic settings, metrics might be generated for each pillar along these lines:

*Access*: University records can show geographical distribution and student enrollment.

*Learning effectiveness*: Student grades, retention, graduation, postgraduate employment and other conventional methods of learning effectiveness can be recorded.

*Cost effectiveness:* One can measure the relative cost of conventional versus e-learning options.

*Faculty satisfaction*: Faculty surveys and interviews, as well as the number of faculty volunteering to teach online, are good metrics.

*Overall student satisfaction*: Course satisfaction surveys are commonly used at universities and are a good metric. Student retention or course completion rates are also relevant and can be applied to learning effectiveness as well [8].

We now turn to the matter of applying the Pillars to corporate environments. As a first approximation, it appears that all the elements in Pillars A can apply quite nicely—with one exception—to corporate learning. That exception is f*aculty satisfaction*. This Pillar, so natural in academic settings, does not fit industry at all. In corporations, instructor-led online learning represents only a small part of training and will doubtless remain so for quite some time. Nor is instructor satisfaction in corporate learning a critical dimension.

Because management satisfaction is absolutely critical for corporate learning to succeed, we have replaced *faculty satisfaction* with m*anagement satisfaction* as an essential corporate pillar. Since learning organizations occupy cost-centers, not profit-centers, at most companies during economic downtowns, they are vulnerable and subject to cost-cutting. Consequently, the learning unit must devise appropriate metrics to capture management's objectives. Used effectively and judiciously, metrics generated for management *satisfaction* can be a useful communication tool for the learning unit to engage management, helping to establish a clear understanding of what goals are expected. A version of the *management satisfaction* Pillar was introduced at Johnson & Johnson and Amway to assess improvements in organizational learning.

Let's now take a look at how the model can be applied in companies. While we have chosen to look at the application of the Sloan model from the perspective of a for-profit organization, there are close parallels in other organizations as well.

*Access to learning* addresses the question of reach of learning across the organization. Metrics might include the percentage learning programs are accessible to employees. If your company has introduced learning technology to deliver programs, such as a learning-management system (LMS) or a portal, you might also measure accessibility to technology across the organization.

*Learner satisfaction* covers employee satisfaction with learning and personal growth opportunities. This pillar might include the Level 1 metrics from the Kirkpatrick model. What's more, if your company surveys workers to learn their opinion on various staff services, the results might be used to determine whether employees' perceived personal growth and development needs are being met. Other possible metrics might include an index of the frequency of use and completion rates. In order to produce the most favorable *Learner Satisfaction* metrics, it may be necessary to tailor learning differently for associates and for executives. Similar content might be offered in compressed, short form for executives, with longer more detailed version offered to associates. If the needs of each group are being met, substantially improved outcome metrics are likely.

*Cost effectiveness* examines the capital efficiency of learning investments, with the objective of determining how much is accomplished with given resources and budgets. It is tempting to exploit the data to measure ROI, but there are other and better indicators. Furthermore, ROI of individual programs does not necessarily mean that capital was invested effectively within the wider range of corporate investments and returns.

*Learning effectiveness* examines indicators showing the impact of learning on the organization's strategic direction. Some of Kirkpatrick's Levels 2 and 3 might be adapted for use here. Cross-links might also be made with the organization's innovation or speed-to-market indicators coupled with employee perceptions of their growth and development. If a correlation analysis is employed, caution must be taken not to attribute cause and effect since correlations often examine connections but do not necessarily show casual direction.

*Management satisfaction* looks at indicators of management satisfaction with learning introduced across the enterprise. An obvious indicator is the trend of learning budgets over time relative to business performance. Surveying management satisfaction with the learning enterprise might be another approach. A qualitative metric demonstrating the record of communication between management and the training unit might also be considered. Currently, many managements are also struggling with the issue of how to ensure sustainability for learning programs. The learning function needs to address this and devise appropriate metrics for management review.

The modified corporate version of Sloan-C Pillars (Pillar B) is shown in Figure 2.

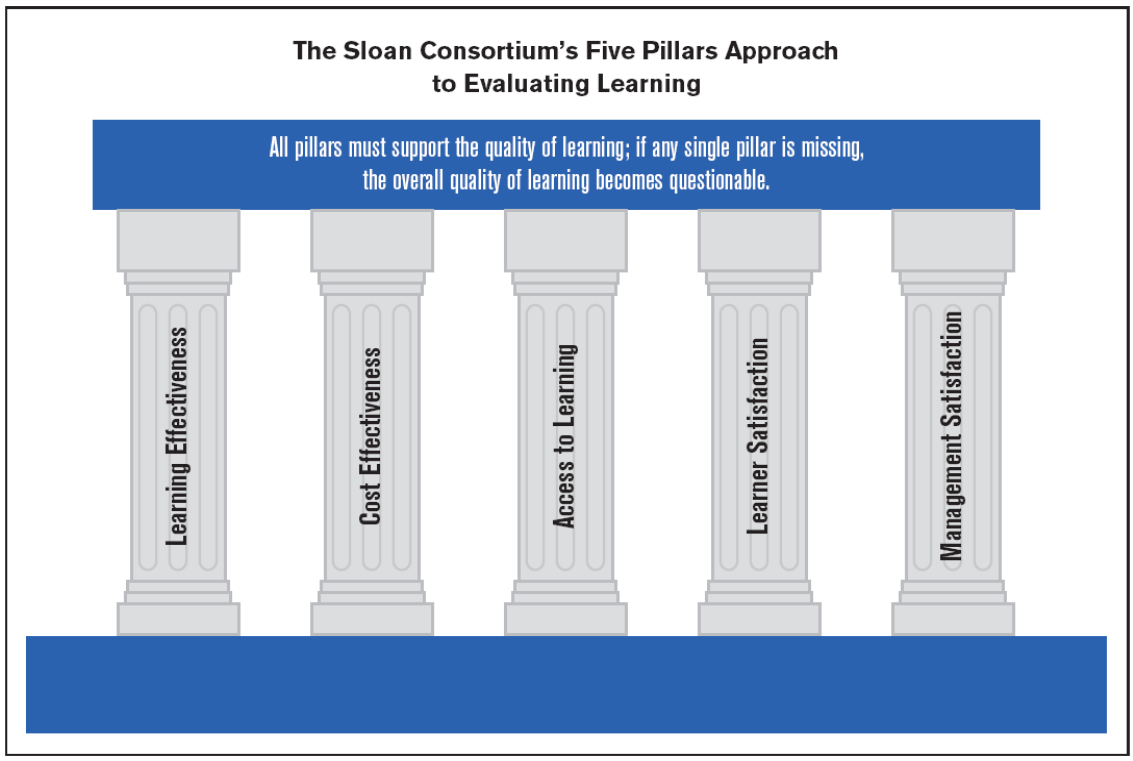


**Figure 2. Pillars B**

## V. CALL TO ACTION

The Pillars not only represent a straightforward assessment model that can be applied in both academic and corporate contexts, but they are also a comprehensive and holistic approach designed to achieve a broad-stroke picture of how well or poorly a learning organization is performing. The Kirkpatrick model and its variants are so embedded in the corporate learning community culture that it may be in a state of what behavioral psychologists call "inattentional blindness." Rather than look at other, more comprehensive ways of measuring organizational learning, corporate learning executives may be content to continue to focus on assessing specific training programs, rather than the effect of learning on the enterprise as a whole.

For the Sloan-C Pillars to be introduced widely as a holistic tool in corporations, learning professionals might usefully take ownership of it—as end-users do with open-source software—adapt it, improve it, and share it with the rest of the corporate learning community. We are open to exploring ways the Pillars might be applied in corporate environments, perhaps in discussions on the Sloan-C website at www.sloan-c.org, and in industry periodicals and conferences supported by ASTD and Sloan-C.

## VI. ABOUT THE AUTHORS

**Kee Meng Yeo**, director, Global Talent Development at Amway, is a business-oriented human resources and organizational development executive. Prior to joining Amway, Yeo was at Unilever and Johnson & Johnson, where he created J&J's first virtual corporate university. Earlier, he was at Pharmacia, Monsanto, Dow Chemical and Olivetti. Author of numerous articles, he has published in *CLO Magazine* and *ExecBlueprints*. Yeo is currently serving on the Editorial Board of *Training Industry Quarterly* and is

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**Frank Mayadas**, Ph.D., senior advisor to the Alfred P. Sloan Foundation, launched Sloan's online learning program more than a dozen years ago and is Founding President and a Board member of Sloan-C, the Sloan Consortium. Earlier, Mayadas was at IBM where he held a number of senior positions, including vice president of research and director of the Almaden Research Center. He was also vice president of technology and solutions and general manager of University and College Systems and also Personal Systems and eventually secretary of the Corporate Management Board and Management Committee. The author of more than 35 technical papers and recipient of several patents and awards from IBM, he is a Fellow of the IEEE. Mayadas has served as a member of the National Advisory Board for Georgia Tech and as Chairman of the Advisory Board of the College of Engineering, University of Illinois at Urbana-Champaign. He is currently a member of the Advisory Board for the College of Engineering, University of Florida, and a Board member of e-Cornell. He also serves on the Board of Enterprise Learning at NYU-Polytechnic Institute.

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