The Challenge of Lessons Learned: Overcoming Barriers to Successful Application

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We have all seen this before: A project team realizes too late that the approach taken or the operational equipment deployed has failed—and it is not the first team to come to that conclusion. If only the lessons learned by others had been sought and applied early in the project.

Look at another scenario: A team learns a valuable lesson during the project but manages to repeat the same mistake again. Perhaps the blame lies in a personnel change or the lack of a systematic way of incorporating the lessons learned earlier. The bottom line is that the team pays the price twice for not learning from experience.

The above examples illustrate the challenge of effectively applying lessons to improve individual, team, and company-wide performance. Industry surveys confirm the spotty track record of effectively benefiting from lessons learned. A 2007 Ernst & Young survey found that 91% of respondents believe that lessons-learned reviews yield valuable results, yet only 13% perform reviews on all programs. The findings from a LogicaCMG survey in 2006 concur, with 51% of the respondents believing that knowledge is poorly managed.

The Nature of Lessons Learned

So what do we mean by a “lesson learned”? It is important to establish an operational definition because the term can mean many things to many people. A lesson learned describes the knowledge gained when results of a project or activity differ from expectations. The difference can be quite dramatic—such as understanding what led to a spectacular success vs. an abysmal failure. The bigger the gap, the greater the potential there is for learning. A smaller gap also has value in highlighting opportunities for continuous improvement.

A lesson can be very simple and explicit, or it can be complex, and the capture or recording of each differs. An example of a simple, explicit lesson involves the proper use of a piece of equipment. These often can be captured straightforwardly and accurately. Complex lessons, on the other hand, often involve much more subtle concepts; the proper interpretation and application of such lessons hinge upon understanding the context or situation. Capturing complex lessons also requires careful judgment and experience because improper application can be disastrous. Application of complex lessons requires “tacit” knowledge that is difficult to write down and often is best shared through a face-to-face dialogue with those who have the experience and knowledge.

It is important to capture and use lessons in a broader framework to maximize value. This is illustrated in a useful “learn before, during, and after framework” developed by Nick Milton. The following items explain this framework further:

• Learning before, or during appraisal or planning phase: Allowing the team or group to apply the lessons at the front end provides tremendous returns in improved performance.
• Learning during, or while executing the project plan or in the operations phase: Lessons identified during execution can be plowed back quickly into the remaining execution phase for immediate improvement. The largest quantities of lessons are generated in this phase of the project.
• Learning after, or preparing to close out the project and transitioning to steady-state operations: Lessons based on hindsight, across a longer time period, offer the best measurable perspective on what has been effectively learned from the project.

Barriers to Benefiting From Lessons

There are four key barriers to the effective application of lessons:
• Lack of leadership involvement in and commitment to the learning process
• The quantity of lessons available (too few or too many)
• Difficult location and accessibility of lessons
• Untimely lesson capture and application

The lack of leadership involvement in and commitment to the learning process is the most critical barrier. This quite often results from two underlying causes. One cause occurs when management lacks a clear understanding of the “learn before, during, and after framework” and the level of sustained leadership engagement throughout the project is underestimated. The 2007 Ernst & Young survey previously discussed confirms this, with 37% of respondents identifying “inadequate sponsorship” as a barrier to realizing the benefits of lessons-learned reviews. For example, management may view lesson capture and application as a superficial one-time event that occurs only at the end of a project or team activity. In reality, the most benefit from lessons occurs when they are proactively applied before project execution begins. This opportunity is often missed in the rush to take action.

The second serious problem occurs when leadership fails to recognize the true results from a project or team activity,
politicking the outcomes to suit leadership preferences or beliefs. An unfortunate disconnect between fact and fiction occurs, without any beneficial application of lessons learned. Management should embrace an unbiased recognition of the unvarnished truth that the organization has learned. That recognition is the first step in honestly applying and benefiting from the lesson.

Strong management commitment also helps to alleviate the natural resistance of many individuals to share their lessons. The old adage “knowledge is power” is truer than ever in our fast-paced environment. The oft-heard excuse “I'm too busy” nevertheless serves as a convenient way to avoid identifying and applying lessons. Strong management commitment addresses this by making sure that adequate time and resources are allocated.

An example that demonstrates the power of leadership involvement and commitment is the creating and sustaining of a positive safety culture. The tremendous strides made in improving safety performance in oil and gas operations would not have been possible without strong dedicated involvement and commitment by leadership.

Too few or too many lessons is the second key barrier. Teams are reluctant to contribute lessons to a sparse lesson repository until they see value from lessons that are already there. Too many lessons, on the other hand, result in an overwhelming task for teams in combing through and finding those lessons that may apply to their particular situation. Lesson repositories, when poorly managed and indexed, can result in a dumping ground of trivial and confusing lessons that offer little or no value to others.

Lessons that are too complicated or too difficult to apply are the third key barrier. This situation can result when the lessons are poorly communicated and do not offer specific usable information for those who would benefit from the lesson. Several root causes typically contribute to this situation. First, solid skill at capturing lessons may be lacking across the organization. Without training in the basics of how to capture a lesson effectively, team members may default to lessons with vague information and unclear recommendations for those facing the same challenge.

One example of a classic, poorly written complex lesson (and one that the authors of this article have encountered frequently) is “make sure you have the right people on the project.” While the intent was positive, this “lesson” provides no specific, usable information to benefit anyone. Effectively transferring complex lessons requires providing specific details on how to contact and have dialogue with those who have the knowledge. Use multiple media (e.g., text, pictures, video, and audio) as well as guidelines, checklists, or procedures to communicate the lesson further.

Improperly stored lessons can make retrieval difficult. Lessons are also quite often bundled together into a large post-project-report format or stored in a repository without an index. A single bundled report format makes it difficult to find the specific individual lessons that have value for subsequent activities. Not having an index for a lesson repository hinders users from locating useful lessons. The technology and user interface for the lesson repository quite often is confusing and difficult to navigate, making lesson capture, searches, and application difficult.

The fourth key barrier is untimely lesson capture. Quite often, lessons are viewed as something captured only at the end of the project or event. This historically has been the case for large construction or facilities projects. The underlying reason is that a “learn before” strategy has not been implemented, which searches for and applies relevant lessons early in the planning phase and before execution begins. Collecting lessons at key stages along the way helps reduce delays in their application on other projects. Also, lessons may have a shelf life and may become outdated because of technology or other changes. Periodic review and culling of lesson repositories are required to remove lessons that no longer have utility.

Critical Success Factors in Overcoming Barriers
Three critical success factors address the above barriers:
- Effective executive sponsorship and engagement
- A tailored combination of people, process, and technology
- A robust benefits-realization process.

As previously discussed, executive sponsorship and engagement is the primary key in developing and sustaining an effective learning culture that enhances business performance. Executive leadership must play the stewardship role in identifying strategic knowledge needs—what the organization needs to know most to be successful. Effective learning behaviors by individuals—both sharing what they know to help others and seeking help from those who have the experience—must be recognized and rewarded. Executives should also demonstrate commitment by asking how lessons have been captured, shared, and applied. Adequate time, resources, and budget to develop and sustain the learning process and tools must be provided.

A tailored combination of people, process, and technology is necessary to make lesson capture and sharing a part of everyone’s job. People need appropriate training to become competent in writing lessons and in using simple learning processes and tools. Learning simple and effective processes needs to be woven into the basic business workflow. As knowledge-management expert Nick Milton put it, “The management of knowledge, like the management of anything else, needs to be systematic rather than ad hoc, and needs to be tied into the business cycle.” Technology, as in software applications, helps make lesson capture and sharing possible for individuals and teams across the enterprise. What is the goal for any learning software application being considered for deployment? Be ridiculously easy to use!

Finally, the long-term sustainability of any learning system depends upon having a robust benefits-realization system in place. The ability to demonstrate the benefits of the learning system fosters sustained executive sponsorship. Without this, sooner or later, budget pressures and a lack of clarity of the return on investment concerning the learning system will result in its dismantling.

British writer Aldous Huxley said, “That men do not learn very much from the lessons of history is the most important of all the lessons of history.” Knowledge of how we learn—and how to apply the lessons of history—has evolved rapidly over the last decade. When given proper support from executive leadership as the critical starting point and continuing catalyst, capturing the lessons of history as they evolve and learning from them consistently are excellent ways to improve business performance.