Beyond Measuring Service Quality: Learning from the Voices of the Customers, the Staff, the Processes, and the Organization

Shelley Phipps

ABSTRACT
As ARL LIBRARIES BEGIN SERIOUSLY TO ASSESS how well they are anticipating, meeting, and delighting students and faculty, the primary focus should be on understanding customers' needs, learning quick and clean methods of data gathering and analysis, improving critical processes, and developing internal capacity to be successful in the future. To transform the work and how it is accomplished, libraries must begin listening and acting on the voices of customers, staff, work processes, and the organization for the purpose of learning new directions and partnering with customers.

The purpose of sharing macro data among ARL libraries should be to provide benchmarking information for the overall improvement of academic libraries. The purpose of gathering service quality data should be to identify what is working well and what is not and to increase knowledge of customer requirements. Data gathering must be easy, meaningful, and clearly related to customer satisfaction for staff to commit to using performance measures. Involving staff in strategic library-wide and unit level strategic planning will be key to building this commitment. Methodologies, such as LibQUAL+, can work as "pointers" to the need to study specific processes. Gathering data from the process itself is one of the most efficient methods for measuring performance and is also useful for helping staff recognize the need to change and enhance services. Using these data to develop performance and learning goals supports continuing customer focus. As the customer perspective is integrated into planning and
decision-making, practicing the disciplines of the learning organization will ensure the development of the organizational capacity to respond to this new picture of reality.

**INTRODUCTION**

As the Association of Research Libraries undertakes the development of "new measures," the intent and expected outcomes must be clear. This new initiative involves more than the application of new measures. The effect of this effort appropriately includes the design of new methodologies that focus libraries on customers. It is recognition that customers are key partners in our enterprise and will, in fact, determine the future of research libraries. Collecting data from and about customers will help in the design and development of the future mission critical work processes and service priorities of academic research libraries—many of which may not be in the current portfolio or are not appropriately staffed and organized for the greatest efficiency. As these new methodologies are examined, it is critical to recognize that they are part of a major culture change for libraries. Satisfaction and other customer data, such as needs assessment results, will be gathered that have major relevance and meaning for staff and a change in the organization of work. Previously, ARL input data was understood and shared within a small group of administrators who drew assumptions from it and who created administrative budget strategies at the campus level to justify funding increases. The utilization of outcome data from the customers' perception of expected service quality should lead to a wider sharing and internal use of this information for the purpose of improving processes and to engage in formal organizational learning.

Service quality measurement is but one step in the process of transforming libraries so they can participate as full collaborators and leaders in the necessary and positive transformational changes in higher education. The library of the twenty-first century must be a new entity. Educating staff in the utilization of new measures will increase the required capacity for organizational learning that will support the creation of this new library.

Leading in these new directions will be challenging. Different leadership skills and different organizational systems that support staff in their efforts to understand and embrace these changes will be critical to success. Staff will need to re-focus their efforts on performance for customers; redesign work to be cost-efficient and of improved quality; and develop new analytical, technical, and teamwork competencies that will enable future success.

The need for culture change is clear and fundamental. Despite claims to the contrary, academic libraries are internally focused—choosing and planning work priorities based on present competence, traditional work
processes, and limited resources. Analysis of results for customers is not a common practice. There is an underlying fear that expectations may develop that cannot be met. Libraries often have been content with meeting minimum expectations. Through LibQUAL+ and needs assessment instruments, the “desired” expectations, as regards level of service quality and new services, will be more fully understood. Without this understanding, the capability to be viable in the future will be limited. Desired expectations are changing rapidly in the technology-enabled environment within which library services are offered. There is a real possibility that the corporate world will develop the capabilities to appear to exceed even the highest expectations of library users. There is a danger that this will result in a shift of resource allocation and customer loyalty. As faculty and students perceive that the retrieval of relevant information from alternate sources is easier, faster, and sufficient for their present needs, their support of the library, as central to research and teaching, will diminish. The private sector competition has and will continue to recognize the market share to be gained from this customer group, and libraries as they are presently configured will increasingly be marginalized within the educational and research process.

Despite concern and some progress on implementing improvements, in many libraries, present work processes are not cost efficient, and the allocation of resources does not reflect strategic preparation for this radically different future. There is a lack of understanding of how work can be organized to avoid bottlenecks, backlogs, and redundancy. There is little awareness of the actual time or cost involved in delivering products and services. There are too many positions devoted to unnecessary supervision, management, and administration. The need for resource reallocation is understood, but the skills to conduct cost studies and lasting quality improvement initiatives are lacking within the profession.

New measures and a focus on customers are first steps in the right direction for inventing the future libraries that future customers will need. The development of a new culture of research librarianship is critically intertwined with these new initiatives. In this new customer-focused culture, every staff member cares about results. They partner with customers and seek to understand what is needed now and in the future. They know what future to prepare for and know when their work is progressing toward desired results. They know how to analyze their work processes for continuous improvement. All staff members make radical changes in how they organize and manage their work processes, and they learn the new skills and knowledge required for new services and products. And last, they are fully supported by an organization designed to tap their full potential and commitment and reward their efforts to succeed.

This article will examine these four aspects of culture change: (1) listening to the voices of the customers by developing cooperative
partnerships with them; (2) listening to the voices of the staff by creating systems that support staff performance for the future; (3) listening to the voice of the process by learning continuous improvement methodologies to identify whether work processes are effective and efficient; and (4) listening to the voice of the organization by turning libraries into organizations focused on creating the desired future and maximizing the capacity to achieve it.

LISTENING TO THE VOICE OF THE CUSTOMER: DEVELOPING COOPERATIVE PARTNERSHIPS WITH CUSTOMERS

The advent of the globalization of the market economy has been described as the customer's victory. "We are moving from a long-standing period in which what was scarce was the product, to a period where what is scarce is the customer" (Dupuy, 1999, p. 38). No longer can successful organizations focus inward on their own capabilities and processes; they must understand the complex relationship they have with customers and cooperate with them to develop new products and continuously improve according to changing demands and technological potential. Libraries have moved from an environment where they had a virtual monopoly on information access to one where databases, Web resources, and vendors are plentiful and customers have choices. Libraries are no longer the sole providers of access to comprehensive collections of research articles. Electronic and print books are available from dot-com enterprises with a faster turnaround time than libraries have traditionally provided. Information that appears to be relevant, accurate, and timely abounds on freely accessed Web sites. This has led to the need for the development of a formal and extensive capacity to listen to customers and to become listening organizations. "Listening (in our organizations) is a set of behaviours, of arrangements, of co-operative efforts; it includes how employees' careers evolve, and through this their status in the company, their benefits, their privileges. In order to truly listen to the customer, one must begin by taking a closer look at all of these various domains. In many cases, listening can be quite painful" (Dupuy, 1999, p. 43).

It is critical to recognize that academic research libraries are part of the global economy. One need only look at the effect of Internet access to Web-based information on reference services in academic libraries; at the complexities of the competing economic models of "ownership" among international publishing conglomerates, vendors, authors, and libraries; at the progressive evolution of "distributed learning" and the creation of "internet universities"; or at the current challenge faced when recruiting and retaining the technologically talented. The content (information), the methodologies (technology), and those employed (staff) within the library business, are affecting and affected by the globalization of the economy. Commitment to professional values and a service and educa-
tional ethic is foundational in this changing environment. Survival is an explicit goal in an era of competition if there truly is a value-added quality to the library’s contribution to the educational enterprise that must be preserved.

**LIBQUAL+: A FIRST STEP IN DEVELOPING COOPERATIVE PARTNERSHIPS WITH CUSTOMERS**

The adaptation of the LibQUAL+ instrument is a key initiative that is critical to learning what is important to customers and how they perceive library services in relation to their expectations. First, it represents the first national effort on the part of research libraries to focus directly on the voice of the customer—to move from the inward focus on inputs and production capability to outputs and outcomes. Second, it has been designed and piloted in the spirit of sharing benchmarking information among cooperating libraries. This is a welcome new direction from “colleague competition” toward an expanded view of academic research libraries as part of a larger system engaged in cooperation in an environment that is increasingly characterized by boundless/placeless opportunities for offering higher education.

LibQUAL+ also creates a new culture of cooperation by providing incentive to redefine relationships with the benchmarking partners. LibQUAL+ provides information that can lead to widespread improvement in research libraries nationally and internationally. In order to compete with the growing capability of the corporate world to serve library customers, LibQUAL+ enables us to learn from one another and share successful approaches. It also provides a connection with the combined set of customers that demonstrates a caring attitude, an expectation for feedback, a commitment to quality improvement, and a dedication to partnering in transforming the educational process.

LibQUAL+ must be used as it is intended—as learning from the voices of our customers—at the macro-level. The goal is to develop a valid reliable instrument for pulse-taking, for eyeballing, for gaining a picture at the 30,000 feet level, of what customers view as important and how they experience the library’s capability to meet their needs.

“Unfortunately, marketers in the 1990s seem to have developed a form of ‘satisfaction myopia’ too often focusing on the physical characteristics of their product or service offerings rather than the benefit (or satisfaction) delivered to consumers. Whenever such a misorientation is present, customer satisfaction is likely not to be a top priority” (Vavra, 1997, p. 12). One of the valued attributes of the LibQUAL+ approach is that it provides an opportunity to test how the customer defines satisfaction and moves from our own internally focused definitions of success. Ultimately, success, in the form of customer loyalty and vocal support for budgetary requests, will be measured by the perception of the positive difference made
in the research, teaching, and learning processes on campus. LibQUAL+ provides one important view into those perceptions.

It will be critical, however, to construct and apply additional methods for informing the summary data from LibQUAL+ surveys. It would be unfortunate if results were used to draw inferences or conclusions based on this macro-data without recognizing that assumptions and beliefs of the current culture limit and skew the interpretation. Testing the macro-data with various subcommunities of customers, letting their voices describe their problems, barriers, needs, and wants, must be the next steps after reviewing the results of this comprehensive broad survey. The macro-data gives clues. This is helpful. The aggregated responses may be a symptom of a very different problem than what may be initially assumed. The actual response may be related or not to the specific dimension on a radar chart display. For example, a question related to “Full-text delivered electronically to individual computer” is contained in the dimension, access to collections, where respondents in the pilot data indicated performance as less than expected. Is the problem that the electronic material is not owned? Or is there difficulty in using the access systems designed by the library or provided by vendors? Or, is the problem the lack of staff support for mounting reserve material? Or, is the problem related to lack of tangibles in external campus offices—computers that can network and download? What kind of full texts do customers expect to be delivered—books as well as journals? The answers could be all, some, or none of these. Without testing the assumptions about the macro data, little can be learned regarding the particular need and the appropriate response.

Another example of the need to collect more granular data can be noted in a question about “Complete runs of journal titles”—where, in the summary aggregate pilot data, the pilot group fell below minimum expectations. Are “complete runs” wanted at the expense of monograph titles? Are the respondents utilizing the complete runs recently purchased from electronic vendors? Are they aware of these electronic full runs or do they want them in print? Have they been frustrated, recently, by some missing issues in one or two journals they use heavily?

In these examples, LibQUAL+ points a finger in a direction that needs further research. It is only by feeding back the summary data to specific different customer groups and individuals that the picture will gain clarity. Seeking the assumptions behind their responses, listening to their descriptions of their experiences, and understanding their personal and cultural perspective is a critical next step. Then the professional knowledge and larger system picture within the library, the values and vision, and the understanding of the total environment in which the library must choose priorities and make decisions, needs to be brought to bear. This larger context includes financial impact assessment, strategic implications, publishing trends, technological capabilities, competing customer de-
mands, staff competencies, and the service quality capabilities of established processes. In this entire context, there can be an assessment of what must be done to improve the ratio of customer expectations to their perception of current library performance. The goal must still be to improve the ability to satisfy the customer, but the many variables involved will be clarified and the strategic actions chosen will be based on the reality of their needs. Innovative alternatives might be designed that go well beyond original customer expectations. The vision, values, and unique competence contributed by the library to the educational process will be a part of the solutions developed. An example of the importance of specific follow-up resulting in a more innovative service than originally expected by faculty is the offering of access to electronic journal articles. If responses showed dissatisfaction with "complete runs of journal titles," and the actual concern in specific departments related to the lack of access to important back files, the approach taken by the library would not be the same as if the problem was the lack of actual titles judged important to current research in the field. The library might develop new consortial agreements to address the first issues, but it may purchase new electronic databases that drastically improve accessibility to current literature in a field to address the latter. The financial implications of the two solutions differ greatly.

Following up on LibQUAL+ information also provides an excellent opportunity for developing meaningful cooperation with customers. Validating their experience from their point of view, genuinely seeking understanding, sharing the library's perspectives—both the limitations presently faced as well as the commitment to creatively reduce those limitations—can lead to a collective effort, with loyal customers, to expand the library's capabilities. What personal experience demonstrates and the original SERVQUAL research indicates is that customers want prompt service and employees who are courteous, knowledgeable, and inspire trust and confidence (Parasuraman, Zeithaml, & Berry, 1988, p. 23). Customers do not always expect an instant response with 100 percent quality or 100 percent availability. Customers of libraries do expect to be able to utilize services and collections to be successful in their teaching, research, and learning. It is from this perspective that they respond to surveys such as LibQUAL+. Demands on their time and expectations for their own work influence their desire for reasonable wait times, increasing ease and reliability, and increased access to resources. They are also influenced by their awareness of the current capabilities of technology (Osborne, 2000, p. 347). What they expect as they interact with other retail and service industries, they are highly likely to expect of libraries. LibQUAL+ provides an excellent opportunity to listen to the voice of customers; establish proactive caring relationships; and gain customers' cooperation in increasing the capacity of libraries to meet their expectations in the future.
LISTENING TO THE VOICE OF THE STAFF: CREATING SYSTEMS THAT SUPPORT STAFF PERFORMANCE FOR THE FUTURE

Once customer needs are understood, at the macro and more detailed levels, we need to listen to the voice of the staff in libraries. If caring to succeed with customers is going to permeate the new culture, organizational systems that support staff efforts need to be designed and implemented with staff members’ full involvement. These systems need to support staff to focus on performance, know how to measure progress, and help them develop the new knowledge and skills needed to improve service quality. Key systems need to be integrated into the organizational structures to develop this new culture:

- a strategic planning system that fully involves and utilizes the knowledge and experience of staff, and
- a performance effectiveness management system that provides support for goal setting, measuring, and positive support for performing and learning.

ENGAGING STAFF IN LIBRARY-WIDE STRATEGIC LONG-RANGE PLANNING

It will be very difficult in this complex and ever-changing environment for a few “hero-leaders” to determine the strategies necessary for success with customers and stakeholders. Expectations change quickly. Trends develop in months rather than years. If only those in administrative positions analyze data, scan the environment, and promulgate the plans, widespread organizational commitment will be less than sufficient, agility will be hampered, and the ability to proactively create the necessary future will be limited. It is the staff and librarians on the front lines who will form these partnerships with customers. The entire organizational competence must be utilized. All staff must be involved to plan successfully for the future.

Leaders must design and implement databased, customer-focused, strategic planning processes that involve staff in order to increase staff commitment to engage in the many new efforts that will have the most important strategic impact on outcomes for customers. Staff must be involved in learning about customer needs, current dissatisfactions with the whole library, and future customer priorities as part of strategic planning. Cross-functional efforts to identify and reduce the “biggest” barriers to customer success, or create new approaches to address the “highest” priority needs of customers, enable the organization to take advantage of the breadth and depth of competencies that exist in its various units. Giving staff the opportunity to serve on cross-functional teams outside the boundaries of their work unit, and utilize skills otherwise not recognized, or learn skills that will be needed in the future, will expand organizational
competence. Encouraging this level of commitment and involvement will also lead to the creation of promotion and compensation systems that will enable retention of those who are key to success in the future. As staff assume full responsibility for the various levels of the planning process, the organization taps into the full intelligence and creativity otherwise lost in a hierarchical planning process.

Staff-driven strategic planning processes such as Hoshin planning or management by planning, utilized at the University of Arizona, begin with an analysis of the current and future external environment, including analysis of customer input and assessment of needs. The strategic long-range planning team then sets five-year strategic goals with multi-year performance measures and annual targets for Quality Standards (see http://www.library.arizona.edu/library/teams/slfp/syllabus/measure.html). After the five-year plan is drafted or revised, an annual plan is developed. This consists of cross-functional and functional team projects focusing the year's major critical work on preparing for the future, solving the biggest customer problems, and positioning the library to intentionally move forward toward the multi-year quality standards.

**Supporting Staff in Caring About Performance and Learning About Measurement**

Research library organizations must design internal systems that help staff keep current with customer needs, understand the real causes for dissatisfaction, discover what would increase satisfaction, and focus staff efforts on improving services and creating new products. Library performance management systems need to support this staff focus on customers. The systems must call for staff to directly interact with customer groups, assessing needs and learning about concerns and service expectation shortfalls. The systems must also empower and encourage accountability at the work group level to perform and measure success from the customers' viewpoint.

One effective way of doing this is to begin utilizing team or work unit structures that increase capability for success. Structures that increase shared accountability, foster interdependence and collaboration, provide for synergistic learning, and allow for increased innovation and productivity are called for (Katzenbach & Smith, 1993; Scholtes, 1998). Creating teams or work groups is not enough, however. In order to be high performing, teams must be provided with a formal framework for focusing and evaluating their efforts from the customer perspective. Helping teams to create a strategic performance framework will be most important, a framework in which team members gather data from customers, create quality standards, plan individual and team projects to meet these standards, and take ownership for measuring the results and for continuously improving.
Increasingly, libraries are asked by external stakeholders to define and account for success, to demonstrate positive outcomes, and to keep up with changing demands. Communicating this urgency to demonstrate actual outcomes to staff on the front lines is critical. The organizational infrastructures and performance systems created in the past do not facilitate this new mandate for external focus on measurement of results and continuous improvement. Traditionally, some departments—for example, serials, special collections, and media—were structured to organize or provide service around certain information formats—an internal focus. Others were structured to encompass certain work processes—such as reference, instruction, or access—that may limit thinking about alternative modes for delivery of customer service or actual priority needs of customers. As rapid changes occur in the environment, organizing principles are needed that anticipate the directions for changes and enable the creation and delivery of new service responses. The University of Maryland has created such a unit called “Service Plus” while others are developing “Information Commons,” perhaps leading to an infrastructure with a much clearer focus on outcomes and future customer needs that cannot be foreseen today. The important aspect of these units is that flexible staff with diverse talents, committed to a common service goal and an agreed upon approach, work together to understand needs, innovate if required, and offer high levels of service quality. These are the characteristics of full-fledged teams. Teams are accountable to customers and capable of solving problems without management directives. Using data, an understanding of good practice, and the library’s vision, teams are empowered to make decisions.

Teamwork that truly increases performance requires the development of new skills and abilities. Staff need to be trained and supported in the development of teamwork skills. Implementing a performance effectiveness management system that can guide staff in creating team quality standards from the customers’ point of view and help staff learn which data to use to measure progress and success is essential. In a customer-partnership culture, performance systems should guide staff to hold themselves mutually responsible for engaging in efforts to attempt to exceed customers’ expectations. Teamwork requires collaborative planning, synergistic learning, and accountability to measure results.

Many current performance systems have an inward focus. Goal setting processes start from “what is the present capability?” rather than “what does the customer group need the most?” A management by objective framework, which results in setting specific management-determined targets, in practice leads to limit-proscribed performance. Frameworks that focus teams on continuously increasing performance and expanding capabilities will better support the new culture where caring to exceed customer expectations is always the goal. Many performance appraisal sys-
tems focus on evaluation of past performance. Embedded in these systems is a foundation of reward and punishment. Systems are needed that focus on the future, on support for individual growth and learning, and on progress in developing positive relationships with, and outcomes for, customers.

The University of Arizona Library is attempting to move in the direction of this new culture by implementing a team-based Performance Effectiveness Management System (PEMS) (see Appendix). In the past, performance appraisals focused on individual ability and contributions based on existing expertise and specialization. Individual capability was delimitied by "professional," "technical," "clerical," or "managerial" job classifications and hierarchical and departmental relationships. Goal setting examined internally determined measures of success as set by administration and/or negotiated with the department.

In the PEM, staff members engage in creating their teams' strategic frameworks and establish quality standards for service that would be expected by customers. There is a shared responsibility for utilizing the skills and talents of all members of the team to work toward meeting those standards. All members are encouraged to develop and apply new skills regardless of job classification. Teams increase performance through synergy, focusing on high quality standards, and paying explicit attention to defined performance measures (Phipps, 1999, pp. 114-15).

To succeed in such a new culture, teams or alternative work units must be guided by the organization's infrastructure and support systems to focus on continuous quality improvement. If systems are not in place to support a culture of assessment, staff will not be able, willing, and committed to utilize data to transform their work efforts as needed by changing customer demands.

Gathering, analyzing, and utilizing customer data is only one part of a larger complex transformational culture change that is needed to ensure the ability of academic research libraries to survive and compete. Staff must want to be successful for customers because of the intrinsic reward of being involved in making a meaningful contribution. Recruitment and hiring systems need to be effective at selecting staff with this potential motivation. Work goals and requirements need to help staff recognize that they are part of a whole that is carefully structured to contribute to the improvement of the educational and research processes of our campuses. Performance appraisal systems need to provide a continuous feedback loop that demonstrates to staff whether their efforts are successful in meeting customer needs.

The Performance Effectiveness Management System calls for teams and individuals to seek feedback to learn how to increase effectiveness and to focus on learning new knowledge and skills that will help the library be successful in the future. In this kind of performance system, data
are collected by the teams, and macro-data are analyzed by the whole staff. Individuals set goals aligned with team and library quality standards. Peer team members review each other’s progress with the intention of helping each other succeed. As individuals succeed in achieving their goals, the team succeeds with customers.

In the traditional hierarchical culture, data are collected and used in central administrative units. Indicators of problems or progress are not understood throughout the library. Recognition of possible trends or “red flags” does not permeate the organization and therefore does not usually drive the annual planning processes of the units. In this culture, those who are farthest from the customer utilize the data, largely for justifying budget increases, losing the opportunity to involve those who partner with and serve customers directly. As new measures are explored, it must be recognized that it is the efforts of staff that are being measured indirectly. They deserve to be involved in the interpretation and use of those measures to plan their work (for an interesting history of hierarchical organizational structure and its tenets, adapted from the Prussian Army and introduced to American business as a way to prevent train wrecks, see Scholtes, 1998, p. 2).

Team or unit and individual efforts are key to continuous improvement—using data as feedback help staff learn, grow, and increase performance that relates to customers’ changing expectations. Using these data to plan the year’s work is a key link to developing continuing partnerships with our customers.

LISTENING TO THE VOICE OF THE PROCESS: TECHNIQUES THAT ENSURE THAT WORK PROCESSES ARE EFFECTIVE AND EFFICIENT

Introduction and Background

Data from the LibQUAL+ instrument contributes to a fuller understanding of desired outcomes and emphasizes listening to the voices of customers. Designing systems that involve staff in strategic planning processes, the creation of performance management systems based on measurement and feedback for continuous improvement recognizes the importance of the voice of the staff. To gain further understanding of how to achieve the outcomes customers need, the ability to listen to the “voice of the process” is central.

Involving staff in process improvement research is one way to ensure that the library is listening to the voice of the process. Continuous process improvement is not a technique so much as it is a method for developing a change in attitude about how work is accomplished efficiently and effectively. It is an effective tool for developing staff commitment to producing results for customers. A process improvement study reveals a process’s shortcomings. The study steps lead to recognition of inefficiencies or prob-
lems with quality improvements that result from the way tasks are organized, staff is deployed, work is scheduled, or training is conducted. Bottlenecks, delays, errors, redundancies, non-value-added work, and unnecessary variation or unpredictability become evident. Often, using this methodology, problems are unearthed that, when remedied, actually contribute to exceeding customer expectations and/or reducing the costs associated with producing the desired results for customers.

"Before one can improve any system, one must listen to the voice of the system (the voice of the process). Then one must understand how the inputs affect the outputs of the system. Finally, one must be able to change the inputs (and possibly the system) in order to achieve the desired results. This will require sustained effort, constancy of purpose, and an environment where continual improvement is the operating philosophy" (Wheeler, 1993, p. 21).

The concept of continuous improvement is embedded in Total Quality Management (TQM). “If Total Quality Management has a distinctive strength, it is its capability of providing an integrative methodology for accomplishing ‘more with less’ through complex organizational action” (Harwick & Russell, 1993, p. 499). One of the basic tenets of TQM is that of focus on the customer, making its relevance to organizations faced with the “customers’ victory” in the global economy very timely. “TQM as customer-leadership methodology should be understood as a strategy for the 1990s and beyond, involving long-term changes in institutional culture and institutional structure that begin and work through change in institutional process” (Harwick & Russell, 1993, p. 504, emphasis in original). Undertaking process improvement constitutes an action methodology that institutionalizes employee involvement and illuminates the relationship between what work is done and what results are produced for customers.

Continuous process improvement is also referred to as paying attention to the Gemba—a word used by the Japanese, derived from two Chinese words meaning “specific work” and “place.” “Gemba is the assembly of critical resources and the flow of work that contribute to those efforts that directly add value to the customer” (Scholtes, 1998, p. 76). The Gemba is the “mission critical” processes and their supporting resources—staff expertise, staffing allocations, technology and partnerships with suppliers and customers—within an organization. The Gemba’s measure of success is the delight of external customers and continued customer loyalty. The success of all other work in the organization (work in administrative, financial, and technical support functions) is how well it serves the Gemba. By conducting process improvement studies, the key relationships between organizational structures and systems, work process design and staff productivity, as evidenced by outputs and outcomes, is more fully understood. Listening to the voice of the process leads to a realization that work design, process simplification, and appropriate use
of innovative technology are absolutely key to meeting customers’ expectations.

Overview of Process Improvement Activities

A successful process improvement study depends, in large part, on:

- discovering customer expectations
- analyzing where and why the process falls short of those expectations
- creating and implementing solutions so the process will meet or exceed customer expectations

A first step in a successful study is discovering, through customer input, the quality standards or specifications that will meet customers’ needs; listening to the voice of the customer will provide the information needed to determine the standards or specifications that are satisfactory to customers. This discovery process can also generate ideas for what might delight the customers or exceed their expectations. For instance, customers may be concerned with accuracy of information received, reliability of service, or timeliness of access. They can be asked to estimate specific minimum and desired levels of each quality. They can describe how the service is used and what outcome they derive. This information can be useful in determining whether additional effort, resources, or enhanced technology that enable surpassing the present expectations will be welcomed or seen as non-value added.

“While specifications may be used to define when one is in trouble with regard to the voice of the customer, specifications do nothing to describe or define the voice of the process” (Wheeler, 1993, p. 23). Specifications derived from customer input do not indicate what is actually happening in the work process that may have contributed to after-the-fact feedback from an instrument such as LibQUAL+. If organizational focus is limited to whether or not customers perceive that quality standards or specifications have been met, a failure to detect the changes signaling that a process cannot be counted on to produce a consistent desired result or operate at its maximum capacity can occur. It is of little value to discover where services and products fall short of customer expectations if causes cannot be analyzed and increased quality cannot be provided to customers.

Libraries need to begin utilizing methods that analyze data from a process, over time, so the data can pinpoint problems. Where the quality is unacceptable or undesirable, root causes can be discovered and solutions sought that actually eliminate the problem. Current problem-solving methods that are not data based, and that focus on isolated events, do not have the analytical power of the statistical process control methodology utilized in process improvement research.
Recognizing that variability is to be expected in work processes, statistical process control charts teach us to separate “potential signals from the probable noise. . . . Before one can use data to justify any action, one must be able to detect a potential signal within the data. Otherwise one is likely to be interpreting noise” (Wheeler, 1993, p. 31). Using this methodology allows us to predict the level of service quality by concentrating on the behavior of the underlying process and measuring whether the process is within normal variation or influenced by special causes affecting the process. It leads to taking action for improvement that is directly related to the discovered special cause and not associated with normal variation. Taking action that addresses normal variation will often lead to additional problems or no change in the desired outputs. Discovery of how work is organized and staffed, what resources are allocated, how training is conducted, and how work schedules are affecting the capability of the process, leads to an understanding of how the work design and human resource systems in an organization have led to limitations in service quality. Too often these limitations have been blamed on people as “personnel problems.” The human resource system is then engaged to appraise, judge, and punish, when what is actually needed is a process improvement study.

Listening to the voice of the *Gemba* processes, and filtering out traditional perceptions or mental models of how work should be organized and accomplished, can be very revealing. In fact, many processes in libraries today are unpredictable and the quality of the resultant product or service can vary either drastically or normally. Not meeting a quality standard where variation in the process is normal may be attributed to a lack of sufficient staff. If the variation shows that the process is out of control, a change in process or elimination of steps or previously unidentified special causes can bring the process back to normal without an increase in staff. When customers say they expect “reliability,” they may be communicating that they expect minimum variation in the services and products they receive. “The distinction between predictability and unpredictability is important because prediction is the essence of doing business. Predictability is a great asset for any process because it makes the manager’s job that much easier. When the process is unpredictable, the time series will be unpredictable, and this unpredictability will repeatedly undermine all of our best efforts. In fact, attempting to make plans using a time series which is unpredictable results in more frustration than success. Prediction requires knowledge, explanation does not” (Wheeler, 1993, p. 24) (see Control Chart in Step 5, below).

The control chart is the main tool that assures this predictability. It focuses data so that staff studying the process will ask the interesting and important questions: “What is happening, why, and what can be done to eliminate special causes that are affecting the quality of the output?” The voice of the customer can be used to define what is wanted from a process;
the voice of the process defines what you will get from a system (Wheeler, 1993, p. 79).

At the University of Arizona Library, process improvement teams have discovered ways to reduce the number of staff on a process while improving quality by:

- eliminating non-value-added steps
- redesigning the steps in a process
- introducing more efficient technologies
- improving staff training
- scheduling the appropriate level and number of workers to handle the peaks and valleys of work demands
- outsourcing to a more cost-efficient provider
- restructuring work teams to better utilize staff time

Several of these studies resulted in cost savings and all resulted in improvements to service quality. The library has been able to reallocate over $300,000 in salary monies to reclassify staff, improve salaries, fund new positions, and refresh technology. At least five professional positions from technical processing have been moved to front line direct services and to the Digital Library Initiative. These savings were realized even while order processing, cataloging, shelving, and interlibrary loan cycle time improved, often dramatically.

It has been the experience at the University of Arizona Library that the following steps in a process improvement study can lead to analysis of root causes and the application of solutions that can change the perceptions of customers about their satisfaction.

The Steps Involved in a Process Improvement Study

1. Gather information at the individual and small group level through focus groups, interviews, and short focused surveys on what expectations, experience, and concerns the customer has with the processes under study. Include in this assessment a picture of what would be ideal from the customers' perspective as well as examples of events or episodes that led to their present evaluation of services or products. Sometimes customers cannot pinpoint a problem, but they can describe recent experiences as well as what it would look like if the process were getting the best possible outcome.

2. Determine what qualities of the product or service they value most; LibQUAL+ dimensions can be helpful here but there may be other desired qualities. These expectations should be tested with customers. For example, if timeliness is identified as an expected quality, determine what turn around time would be considered "acceptable" and what would be "desirable."
3. Map the present workflow. Detail the steps associated with accomplishing the process. Many insights surface during the process mapping that point out possible problems. This step often reveals duplication of effort, lack of clarity as to who does what, differing methodologies utilized by each staff member for completing a step in the process, and the identification of "non-value-added" checking or approval of work that is 98% correct to begin with. This step often reveals that some staff do not know to whom their part of the work is handed off, and what is done after they finish their part. Not knowing what is required for the next steps to be efficient makes it difficult to ensure that those required steps are consistently taken. Or, as sometimes happens steps are eliminated in one part of the process to achieve an efficiency and the relationship to the following steps is not understood. The process of mapping allows the staff to hear the actual "voice of the process" at the step or task level (Lawton, 1993, pp. 108-11).

4. Gather all available data from and about the process that is related to the qualities desired by the customer. This can include information related to, for instance,

- downtime of machines
- time it takes an item to completely go through the entire workflow
- number of "problems" referred to a supervisor
- an analysis of complaints
- volume of transactions/items processed per day/week/year
- charting of peak periods and slow periods

Gathering and charting these data will often demonstrate that staff perceptions of how a process works are sometimes inaccurate, especially as relates to the variability or predictability of the process. The inaccurate perception is not the fault of the staff. The way time is estimated often states an average time based on batching or aggregation of transactions. This gives no picture of the actual time it takes for each piece or full transaction to be accomplished. Costs related to staffing and staffing allocations are also significant data to identify if there is a goal to be cost-effective in producing the Gemba services.

5. Use tools to display the data in such a way as to make the patterns, trends, and interpretations grounded in reality. Using statistical process control charts can be very helpful in analyzing time series data and pointing to the actual occurrences of variation and limits of the current process (see Figure 1).

Figure 1 indicates that the time it takes to process a book for the hold shelf varies unpredictably: between 120 hours and 600 hours or between 5 days and 25 days. This picture can hardly be said to afford the customer a reliable service from the standpoint of wait time. Just informing customers of this actual wait time is not helpful. It would be
misleading the customer to indicate that the average wait period is 360 hours or 15 days since, for eleven occurrences, the wait was less than that and for twelve occurrences it was more than that. If staff perceived less than fifteen days to be the “usual” time, they would be misinforming the customers. Utilizing control charts helps us see the process at this level of specificity and begin to understand the service quality from the customers’ viewpoint. Once the study eliminates as many causes as possible, the process is in control, and a predictable time period can be communicated to customers with assurance that the time goal can be met and is within their expectations.

6. Involve those who carry out the task in the analysis of the charts. This will often disclose that staff are aware of problems but feel unable to change the situation. The chart provides a mirror of the actual process. It provides them a view they do not often see but intuitively understand. They are used to thinking in terms of a perceived average time, and the chart lets them see that the Quality Standard set by customers is rarely met. Recognition that this is the current capability of the process leads to conversations about why this is happening and the root cause analysis phase begins.

7. Once all causes are identified, engage staff in designing new processes, suggesting the elimination of or changes in steps, and training for, and learning, new methods that are the most productive for accomplishing the steps with the customers’ desired level of quality or timeliness. Use deep brainstorming to discover how technology may help streamline these processes or how new processes can add value to the
service in line with customer expectations. Staff welcome the ability to streamline and improve but, previous to this research, no study methodology had been taught to them that allows them to do so in a way that maximizes the possibility of implementing the results. Staff are very used to applying temporary fixes, putting out fires, and not having the benefit of seeing how their set of processes adds up to the product or service they provide customers (*The Customer is Always Dwight*, 1989).

As staff begin the redesign process, they must be supported in understanding how what they do, what technology is chosen, and how the steps in the process are to be implemented, result in outputs that contribute to the desired level of quality contained in customer feedback.

8. Choose the optimal solutions, train staff, pilot test their implementation, evaluate the new results from the customers’ perspective, and take action to embed these changes in the work processes. Following the “Plan, Do, Check, Act” cycle, continue to listen to the voices of customers and the voice of the process, adjust and innovate. Aim at providing predictable, ever-improving, quality service that addresses changing demands and needs (Shewhart, 1939; Ishikawa, 1985). 

This brief description is offered to demonstrate how utilizing the process improvement approach can enhance and support the transformation of academic research libraries. Learning to value and utilize assessment techniques for the improvement of services is one necessary step in that transformation. Staff involved in these studies shift their attention from an *internal daily task focus* to an *external customer focus*. They also learn the value of data and analysis in understanding how their work contributes to outcomes for customers. They begin to make decisions “based on facts, research and analysis.” The skills and attitudes they develop then transfer to all parts of their work and begin to permeate the culture of the organization.

The result can make all the difference between an organizational culture that values inputs—“old measures”—and one that is focused on and values the quality and “match” of outputs to outcomes for customers’ “new measures.”

**LISTENING TO THE VOICE OF THE ORGANIZATION: BECOMING ORGANIZATIONS FOCUSED ON CREATING THE DESIRED FUTURE AND MAXIMIZING THE CAPACITY TO ACHIEVE IT**

Some staff think that, by utilizing new measures that are customer-focused, libraries will be driven to “just do what the customers say,” or be driven by “a business model focused on competition and the bottom line.” These are actual concerns raised when discussions of this topic occur at
ARL/OLMS workshops where the Systems Model for Organization Design has been presented. This model is based on the SIPOC (Supplier, Input, Process, Output, Customer) model developed by Deming and others and clearly depicts the customer as influencing the actual processes and the output of any organization. Producing outputs for the customer and organizing to create outcomes for customers is the focus of this model. The model also clearly depicts that the library's mission and vision should be leading forces that help shape the libraries' work design and choice of outputs and outcomes.

This model points to the importance of understanding the difference between being customer-focused in a Learning Organization context and being driven by the "unexamined" articulated needs of our customers and stakeholders. The model assumes a subtle but profound difference between responding to customer needs for the sole purpose of meeting a quality standard, and responding to customer needs for the purposes of organizational learning and the ability to continue serving customers in the future. The recognition of this difference is implicit in a sound definition of a learning organization: one that "is continually expanding its capacity to create its future" (Senge, 1990, p. 14). Developing the capacity to create the desired future, discovering how to tap staff's commitment and capacity to learn at all levels of the organization leads to the generative process of learning. "Learning in organizations means the continuous testing of experience, and the transformation of that experience into knowledge—accessible to the whole organization, and relevant to its core purpose" (Senge et al., 1994, p. 49). In a learning organization, the customer relationship is just one part of a complex system of meaningful relationships.

As libraries enter into the process of discovery and measurement, they "participate more deeply than we imagine in shaping the world that we perceive" (Senge et al., 1994, p. 27). The development and implementation of LibQUAL+ and other new measures places libraries as part of a larger system; a system that encourages the development of a shared common vision questions the organization's present views of reality and fosters learning, as individuals and as groups, and are the practices of a learning organization—shared vision, systems thinking, mental models, personal mastery, and team learning (Senge, 1990).

Research libraries have a shared vision. This vision is embedded in the Keystone Principles: information must be available free of marketing bias, commercial motives, and cost to the individual users; there is a responsibility for creating innovative systems for dissemination and preservation of existing and new knowledge; and that libraries are intellectual commons for the communities they serve, where people and ideas interact to expand learning and facilitate the creation of new knowledge. Listening to this vision should inform what is learned from customers. The
vision should also shape the analysis and solutions developed to create better services and products.

In this environment of ever-changing technological capability, economic uncertainty, social and demographic shifts, and emerging political interests, customer input must be viewed as one set, but not the only set, of important information that should affect strategic planning. The discipline of Systems Thinking must be explicitly practiced. Libraries do not exist independently of this environment. Trends and events external to research libraries are critical to their success. These realities and their effects on us must be understood if the vision embedded in the *keystone principles* is to be actualized. There are stakeholders other than the library's direct customers surveyed in the LibQUAL+ instrument—governing boards, alumni, citizens, and future students, to name a few. It should also be recognized that implicit or explicit partnering relationships with our suppliers are key to this success. Libraries must work on those relationships to ensure that suppliers help maximize the outcomes for customers. SPARC (Scholarly Publishing & Academic Resources Coalition) is one such partnering relationship that ARL has initiated that demonstrates this *systems thinking* approach. In research libraries, there must be a clear view of how the parts, the units of work, relate to the actual provision of a service such as "Access to Collections."

If listening to the organization is practiced in a learning mode, the ability to question current assumptions becomes a well-developed skill. Practicing the discipline of *mental models*—seeking data that allow questioning of deeply held assumptions that shape current views, biases, and internal perceptions—can keep libraries in touch with reality. Discovering through LibQUAL+ can help examine service quality from the customers' perspective. Process improvement efforts can help question perceptions of how successful current processes are, and mapping those processes depicts the reality of their capability. It is important to attain this grasp of reality in order to learn how to change with and for customers.

The application of learning can be accelerated through the utilization of teamwork. The different skills and perspectives, from all parts of the organization, will lead to new ways of thinking and questioning. All staff need to be engaged in leading the organization. They bring untapped extensive knowledge, a variety of experiences and commitment to the vision and purpose. Charging teams with gathering data, assessing its meaning, and using it to change the way services are offered is practicing the discipline of *team learning*. Dialogues within teams, informed by the data they collected when measuring progress toward high performance *quality standards*, produce the synergy that is foundational to the development of new and innovative approaches. Without performance measures and a strategic framework for these dialogues, there is a risk of continued group-think and choices of strategies based on the beliefs of the most vocal or
those perceived as most influential. Learning and sharing learning, then, is a primary focus of teamwork.

Last, if staff are to be supported in moving, changing, and transforming their work environment to truly develop a culture of assessment, building compatible infrastructures that support the discipline of personal mastery will be necessary. Creating a supportive performance effectiveness measurement system can help each individual member of the staff assess her/his own personal current situation and develop goals that enable her/him to achieve personal visions. By encouraging the alignment of individual performance and learning goals with team quality standards, staff see the connection between self-development and serving customers. They are provided the opportunity to experiment, to contribute, to help shape and move toward, the shared vision. Developing such a system is less about setting and reaching goals than it is about setting goals and learning true capability. In designing systems that support personal mastery, there is an opportunity to understand how organizational policies or allocation of organizational resources actually contribute to the inability of staff to reach peak performance capability. By designing a system that calls for reflection, self-assessment, and peer support and advice, the learning organization contributes to the development of individual self-efficacy. A confident staff is a staff that willingly commits to continuous learning. A committed staff is one that can rise to the challenge of continuous change and appreciate the importance of the role played by the library in the accomplishment of the larger institutional goals of education, research, and service.

Sharing responsibility throughout the organization results in the sharing of information at all levels (Senge, 1994). “Silo-ing” of information and data should not be encouraged. This keeps staff in the dark about why change and transformation are necessary. Withholding power from those who have much experience and knowledge to contribute is not an effective strategy for future success. Staff should be included in planning, budgeting, and decision-making. Their views and perceptions should be included and their involvement in following up on what customers report on the LibQUAL+ instrument should be expected. They need to learn how to gather more granular information and use that information to drive improvement in processes and innovation in services. Listening to the whole organization becomes a springboard for change and transformation.

CONCLUSION

The creation of a new culture is a long journey. Many voices are needed to guide this journey and ensure arrival at the desired destination. To hear these voices, strong customer relationships must be forged. Staff involvement must be designed into our organizational structures.
Gemba processes need to be understood and improved. Organizational learning systems, including new measurement methodologies, dialogue, team synergy, and support for personal mastery, must be developed. As new measures are implemented, new approaches must be taken to make them significant. New bottles call for new wine. New measures are not compatible with the structure and culture of traditional internally focused organizations. The purposes behind experimenting with and learning new measurement techniques should not be put in the background but should be at the forefront of all discussions and dialogues.

Experimentation with new measures is for the purpose of discovering what needs to be done to achieve the shared vision of participating fully in the educational enterprise of the institutions of higher learning. The new measures chosen should ensure that there is access to scholarly and government information, that there are effective and easy ways of accessing this information, and that communities of scholars and learners interact in the pursuit and development of knowledge.

To do this, libraries must become cognizant of their current effectiveness. In the spirit of cooperation, libraries must develop benchmarking partnerships that lead to an increasing ability to continue to be effective as a group. Everyone in the profession, not just the leaders, must commit to make a difference and achieve the collective vision. Listening to the multiple voices of our customers, the staff, the Gemba processes, and the organization will be critical as new measures are developed. Each library must become a learning and listening organization. It must also become an acting organization—experimenting, seeking new perspectives and new methodologies, and designing new organizational systems that involve, engage, develop, and increase the commitment of staff and partner with customers to design the future they need that includes library values and vision.

Notes

1 Hoshin planning or hoshin kanri is a system of planning that was widely used in Japan in the 1980s. The terms roughly translate into “target and means management.” Michael Brassard from GOAL/QPC called this system “Management by Planning.” It is very much a part of Total Quality Management and is a process for setting targets and orchestrating the future direction of the organization. Key concepts within hoshin planning are: budgeting to a plan, continuous improvement, and annual breakthroughs. It includes a vertical as well as horizontal organizational focus—a team at the top sets directions and cross-functional teams implement annual projects that support breakthrough developments in a “critical few” strategic areas. It also includes wide involvement of staff in the form of input to the future vision, individual initiative and responsibility, a focus on discovering root causes, no ties to performance appraisal, a focus on quality and not profit, widely disseminated communication, and a focus on processes (see King, 1989). The University of Arizona adapted its planning process in the 1990s from Intel, which practiced Management by Planning, and defined it as: “A system through which management accomplishes its primary tasks.” Hoshin planning:

- defines long-range organizational direction
- defines performance expectations based on customer requirements
aligns resources to accomplish the "vital few" university objectives
integrates employee activities functionally and cross-functionally to maximize impact
for the University (it does not optimize one part of the university at the expense of others)
monitors results to ensure focus and accountability on a continual basis
utilizes data-based decision making for planning and implementation

—From the internal training manual "Management by Planning"

During 1997/98, a Strategic Project Implementation Team designed a framework for all teams to create Performance Measures and Quality Standards for their Mission Critical Processes (see Appendix for details). This framework then guided the development of individual staff performance and learning goals. Charles McClure, Information Use Management and Policy Institute, Florida State University (then at Syracuse University), was a co-consultant on this project and provided the terminology, the importance of aligning team and individual efforts with the strategic goals, and introduced the complexities of measurement. "Quick and clean" was a phrase McClure used over and over again to guide us away from the overwhelming challenges associated with formal data gathering. The other consultants on the project, Metawest, Inc., from Tucson, provided guidance to keep the focus of the framework on continuous improvement for customers and helped develop ways of integrating the new frameworks into the teams via Team Leader Learning Networks.

"A Culture of Assessment is an organizational environment in which decisions are based on facts, research, and analysis, and where services are planned and delivered in ways that maximize positive outcomes and impacts for customers and stakeholders. A Culture of Assessment exists in organizations where staff care to know what results they produce and how those results relate to customers' expectations." This definition of a "culture of assessment" applicable to libraries was originally developed by Amos Lakos (University of Waterloo) and Betsy Wilson (University of Washington) in 1998. It was revised and updated by Amos Lakos and Shelley Phipps (University of Arizona) for the ARL OLMS workshop given at the "Living the Future" Conference, Tucson, 2000. A copy is available from the ARL Office of Leadership and Management Services.

The University of Arizona did not utilize a formal Critical Incident Technique, but those who wish to can consult Stauss (1993) who offers a straightforward description of what is involved.

Two of these studies have been featured in the following articles:

Lawton's book is an invaluable guide to conducting process studies. "Mapping the Process" (pp. 108-111) outlines the main purposes:

• Document the "as is" (current) process for analysis
• Identify process ownership
• Define the relationship among products and activities
• Identify bottlenecks, the critical path, and disconnects (places where things fall through cracks in the process)
• Determine the difference between cycle time and value-added time
• Establish a basis for measuring process performance
• Take action, then evaluate the results
• Measure process performance
• Prioritize improvement opportunities
• Take action

W. Edwards Deming and Joseph Juran worked with Walter Shewhart at Bell Labs in the 1940s. Deming first used this model with the Japanese in the 1950s. Deming changed it to the "Plan, Do, Study, Act Cycle" and recently Ishikawa added two additional steps. Many variations of this basic model exist in the "quality" literature.

"The Keystone Principles were developed by an informal group of librarians energized by the discussion held during a fall 1999 ARL/OCLC Strategic Issues Forum. The group agreed to write a statement articulating the traditional values of academic librar-

**REFERENCES**


APPENDIX

University of Arizona Library Performance Effectiveness System: Outline of definitions of the Team Strategic Framework and Goal Setting Processes

Current Situation/Future Analysis—each team assesses what it knows about its customers, its processes, its outcomes, its suppliers, the environment within which it is operating. This “assessment” is to be derived from data and information from customers as much as possible and informs the framework the team creates for its work for the year as a top priority.

Vision—each team is asked to envision what it would look like if it were totally successful with its customers. A “creative pull” vision is encouraged. Example B: The Fine/Arts Humanities Team will be recognized as a proactive, innovative, and vital force in an information-intense global environment by using our professional knowledge and expertise to meet the specialized fine arts and humanities information and learning needs of customers on campus and in the State of Arizona . . . . and provides learning experiences that inspire intellectual curiosity leading to information literacy, scholarship, and life-long learning.

Mission—each team is asked to define clearly what activities it will perform, what services and products it will provide for what customers, and what boundaries they lay claim to that differentiates their work from that of other teams.

Customers—each team is asked to list and understand the relationship to its primary, secondary, tertiary customers and to identify who its other stakeholders are.

Mission Critical Areas—these are the activities that are critical for the team to perform if its customers are to be served and its mission is to be achieved. In sum, these “MCAs” should define the mission of the team.

Performance Measures—these are the tools used to measure performance and evaluate progress. They are quantitative or qualitative indicators of the degree to which activities, services, and products are successful. Each team is asked to choose which are the most relevant measures they could use to assess success with customers and with stakeholders.

Measures include:

- Output/Extent; Outcome; and Quality (Efficiency, Cycle Time, Accuracy, etc.);
- Cost per unit; Cost per customer;
- Return on Investment; and
- Skills/Abilities and Applications of Learning.
Quality Standards—these are the specific, measurable, desired levels of performance or quality that customers would expect when receiving a service or product.

Data Gathering Methodologies—these are the intended methods for gathering data and information to know whether your quality standard is being met. Methods include measurement of the process (cycle time, accuracy, cost) and measurement of customers' satisfaction or rating.

Future Team Competencies—this is a brainstormed list of the skills and abilities that the team will need in the future to meet and exceed customer expectations.

Projects—these are the most important organized actions that the team can take to meet Quality Standards. Completion of projects should improve the team's capability of meeting the Quality Standard.

Individual Performance Goals—these are actions that individuals will take to achieve a result for customers related to the Quality Standard. They will be S*M*A*R*T goals: Specific, Measurable, Attainable, Results-Oriented, and Timely.

Individual Learning Goals—these are the actions that individuals will take to learn new skills related to their performance goals or to the team's future work. Example B: By October 1, I will have learned the curriculum goals of the 200 level courses in my discipline and learned what Internet products can support enhanced learning in these courses.

Peer Developmental Reviews—these take place at least three (3) times per year scheduled according to the milestone dates in the goal statement; at least three (3) peers, one from the home team and others chosen according to their ability to support and provide feedback, participate as a group; individual prepares a progress report and requests feedback re: successes and barriers; individual documents feedback and develops plan for Next Steps; Team Leaders keep a file of this summary and monitor for performance problems.